

CECO

steel
and
aluminum
windows

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Casements



Basement
and Utility
Windows



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Aluminum
Projected
Windows



Aluminum
Residential
Double-Hung
Windows



Aluminum
Casements



Steel Residence Casements

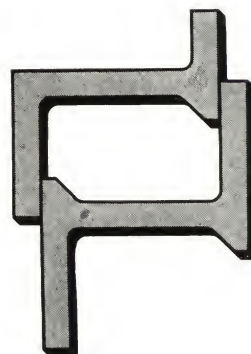


uses

Residence Casements are used by leading designers in all types of homes—large, small, traditional, modern. They are also used in apartments and small commercial buildings. Owner advantages of casements: Side-hinged ventilators control ventilation; full-vented types open to provide 100% ventilation; slender frames provide 10% to 30% more light; easy to open; easy to wash from inside the home; easy to screen and storm proof from inside; hardware included, no extras to buy. Builder advantages: Easy to install. Carried in stock.

full-size section

The Ceco Steel Residence Casement section is a full 1 $\frac{1}{16}$ " deep in both frame and ventilator, providing extra strength where it is needed to assure a continued good weathering condition.



screens and storm sash

Ceco Screens for casements are made in steel or aluminum frame. They are supplied with bronze, aluminum or brown lacquer special cloth, 18 x 14 mesh. Steel frame sections with baked-on finish are standard. Screens are easily attached to the inside of the windows with inconspicuous clips. Windows can easily be opened and closed with the Roto or Lever type hardware without touching the screen. There is no interference with shades or draperies. Frames are furnished with removable spline for rewiring.

Ceco Storm Windows are manufactured of specially designed extruded aluminum sections, assembled and glazed with double strength glass at the factory. Rubber weathering seal is also furnished. Storm window units are provided for fixed side lights, transoms and operated ventilators to give complete coverage of glass and steel. Ventilators are available as illustrated on the left side of the photograph. If wanted, they must be ordered with the windows.

specifications

GENERAL—All windows shall be Residence Steel Casements as manufactured by Ceco Steel Products Corporation, of sizes and types shown on general plans.

MATERIAL—All sections shall be especially designed, hot rolled, new billet steel. All frame and ventilator members shall be special Z shaped sections and shall be of $1\frac{1}{16}$ " depth from front to back and not less than $\frac{1}{8}$ " in thickness.

Frame shall be $1\frac{1}{16}$ " x $\frac{7}{8}$ " x $\frac{7}{8}$ " Z shaped section. Ventilator member shall be $1\frac{1}{16}$ " x $\frac{3}{4}$ " x $\frac{9}{16}$ " Z shaped section. Frame and ventilator sections shall be rolled with a baffle providing a continuous double full contact weathering throughout the entire perimeter of the ventilator without the aid of loose or applied linings. All muntins shall be special rolled T's with $\frac{3}{8}$ " face and a depth of $\frac{7}{8}$ ".

CONSTRUCTION—Corners of frame and ventilator members shall be mitered and electrically butt welded, with exposed surfaces at welds dressed to smooth finish. Muntins shall be attached to frame or ventilator members by means of mortise and tenon joints and air hammer riveted. Muntins shall be continuous between rails and stiles, with intersections of interlocking design and with flush interior surfaces. Side hinged ventilators to open out shall be hung on extension cleaning hinges. Hinge leaves are to be securely welded to frame and ventilator. Hinges shall have bronze-to-steel contact between movable parts. Hinge pins are to be of bronze. All casements shall be prepared for standard application of screens. All Roto casements are prepared for storm windows.

HARDWARE—All unattached hardware shall be packed and shipped separately to prevent damage and shall be applied after erection. Operator shall be Roto, die cast (or Lever, pressed steel) with bronze lacquer finish. Hardware shall control ventilator independently of screen. Roto (or Lever) operator shall securely hold ventilator in open position. Operator arm shall be cadmium plated steel. Locking handle keeper and channel guide for operator shall be attached in shop. For side-hinged ventilators, die-cast bronze lacquer finish cam action locking handles shall be furnished. All hardware shall be attractively and accurately designed for operation required.

For butterfly locking handles add the following: All locking handles are to be of the butterfly cam action type.

GLAZING—Windows shall be designed for glazing from outside, with spring wire glazing clips and steel window putty. (Glass, putty, glazing clips and glazing by others.)

SCREENS—All screens shall be especially designed for use with Residence Casements as manufactured by Ceco. Screens for Roto or Lever type casements shall be the flat fixed type. All screens shall be easily attached and removed from the inside.

RELATED ITEMS

BONDERIZING AND PAINTING—All windows shall be treated with Bonderite and receive one coat of gray primer paint baked on at 300° F. for not less than one-half hour.

FIELD PAINTING—Immediately upon delivery to job site and before installation, windows shall be painted by painting contractor with one coat of color selected by owner, and second coat applied after glazing is completed and putty is set.

ERECTION—All windows shall be erected by Ceco in openings prepared by others. Mastic, provided by window erector, shall be used in sufficient quantity to provide weather-tight seal wherever steel-to-steel contact occurs. Mastic shall be non-staining and specifically adapted for such use. (Caulking shall be by other trades). All windows shall be set plumb and true, properly aligned and securely anchored before glazing.

ADJUSTMENT—After windows are erected in place and before glazing, all ventilators shall be adjusted by erection contractor to operate smoothly and be weathertight when closed.

hardware

• locking handles

STANDARD TYPE



1-8-13241
for either left or right hand
(use two for double adjacent
ventilators)

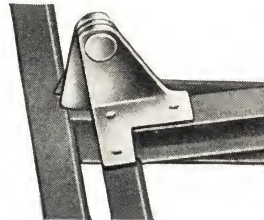
BUTTERFLY TYPE



1-8-12041
for either left or right hand
(use two for double
adjacent ventilators)

Standard Locking Handles are die cast and have a bronze lacquer finish. One handle is used for single ventilators and two handles side-by-side for adjacent ventilators. Solid bronze handles with polished finish may be obtained when specified. **Butterfly Locking Handles**, also die cast with bronze lacquer finish, may be substituted for regular locking handles where clearance is limited by blinds or drapes.

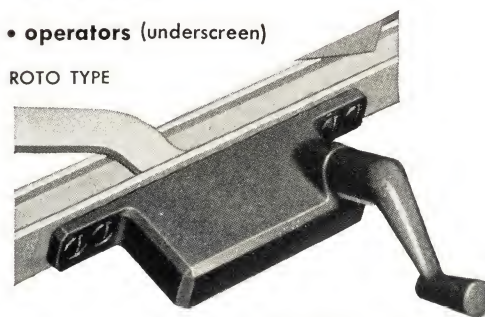
• hinge



Hinges are the extension cleaning type, securely welded to the frame and ventilator.

• operators (underscreen)

ROTO TYPE



1-8-20941—left hand
1-8-21041—right hand

LEVER TYPE



1-8-20111—left hand
1-8-20211—right hand

Operators are available in two types—Roto or Lever. The desired type should be specified. The Roto operator is die cast; the Lever type is pressed steel. Both have a bronze lacquer finish. Solid bronze Roto operators with polished finish are available. Operator arm is cadmium plated steel.

Residence Casements • types and sizes

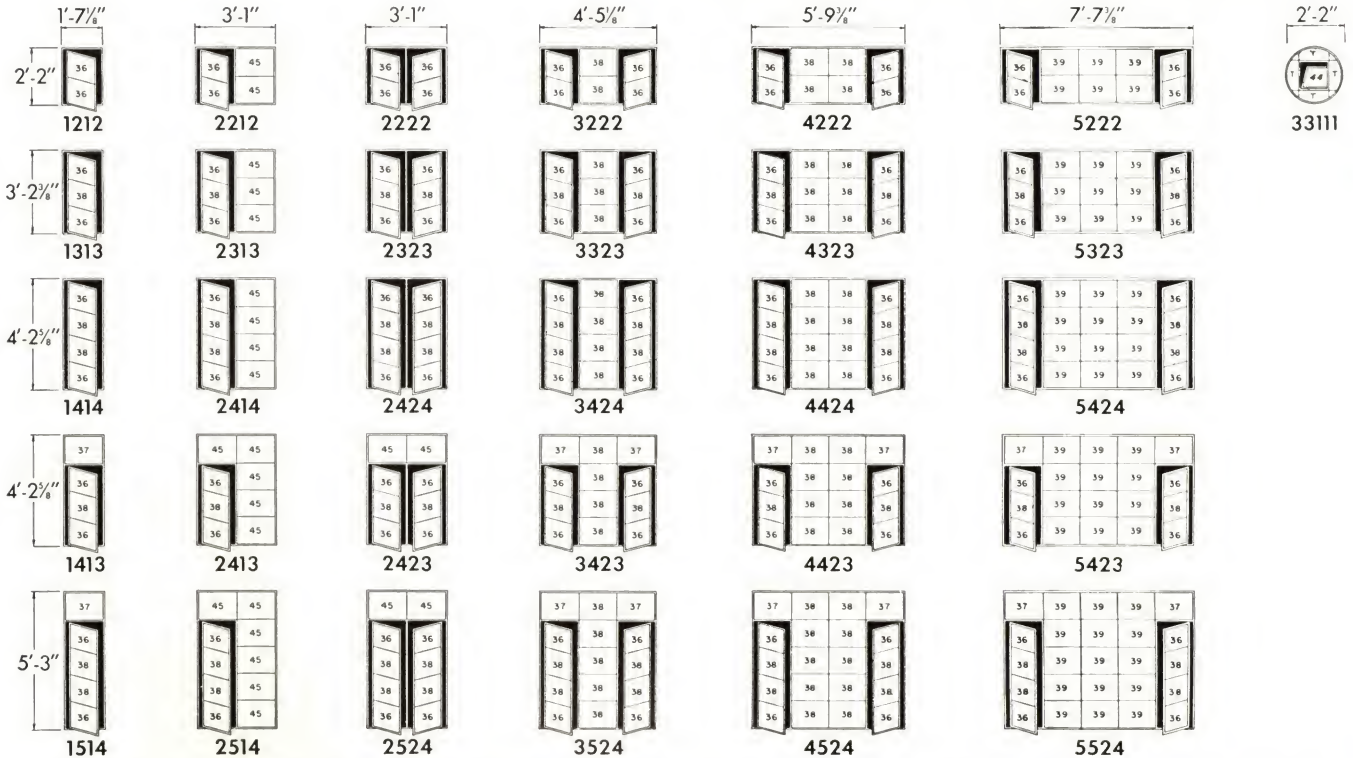
All ventilators swing out and are furnished with either Lever or Roto type underscreen hardware, permitting the opening of the screened window without touching the screen. • Sizes shown are window dimensions. For opening dimensions of single units add $\frac{1}{4}$ ". For multiple window opening dimensions add actual unit dimensions plus $\frac{1}{4}$ ". • For casements with one ventilator, indicate by suffix L or R whether ventilator is left or right hand. All casements are viewed from outside. Handing is determined by location of hinges. A left-hand casement will have hinges on left when viewed from outside.

NOTE: All types shown are also available as fixed types.

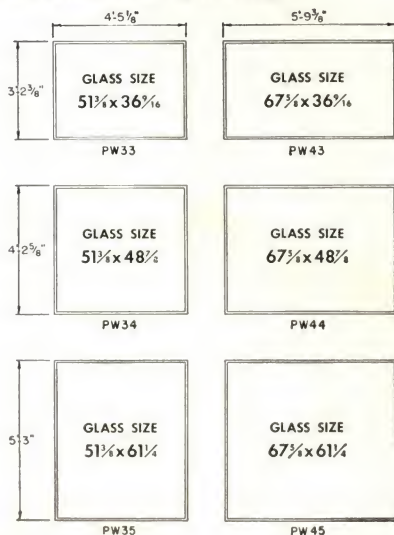
Units shown, fixed or ventilated, are standard warehouse types. Muntin variations, as shown on facing page, may be obtained when specified, but as factory shipment only.

GLASS SCHEDULE					
Mark	W	H	Mark	W	H
36	16	11 $\frac{3}{4}$	44	14 $\frac{3}{4}$	14 $\frac{3}{4}$
37	17 $\frac{1}{4}$	12	45	17 $\frac{1}{2}$	12
38	16	12	95	16 $\frac{1}{2}$	10 $\frac{1}{4}$
39	17 $\frac{3}{4}$	12	T	TEMPLATE	

Glass sizes are for guidance and should be verified on the job.



picture windows • types and sizes for standard glazing

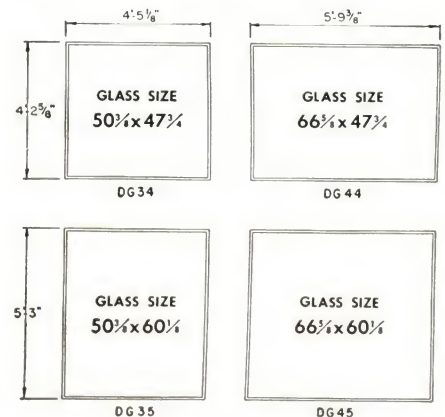


Ceco Picture Windows are available in six sizes for glass up to $\frac{1}{4}$ " in thickness, and in four sizes for double insulating glass, as shown here. Both types are widely used by designers when maximum view is desired. • Sizes shown are window dimensions. For opening dimensions of single units add $\frac{1}{4}$ ". For multiple window opening dimensions add actual unit dimensions plus $\frac{1}{4}$ ". (It is not necessary to add anything for mullions.)

•
For Standard Glazing—The six stock sizes illustrated at the left, for standard glazing, are designed to receive up to $\frac{1}{4}$ " plate glass.

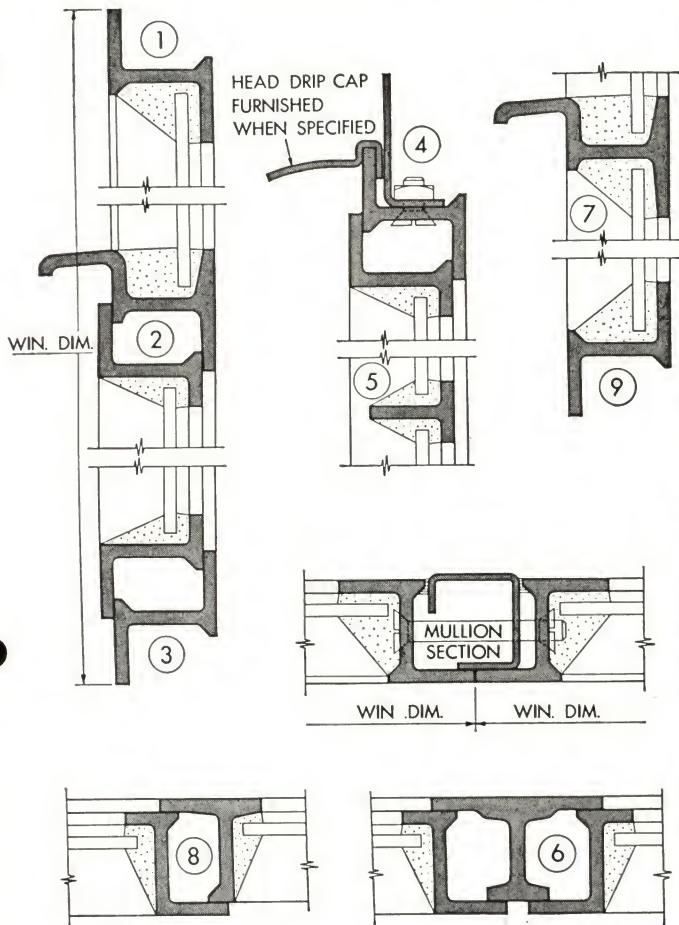
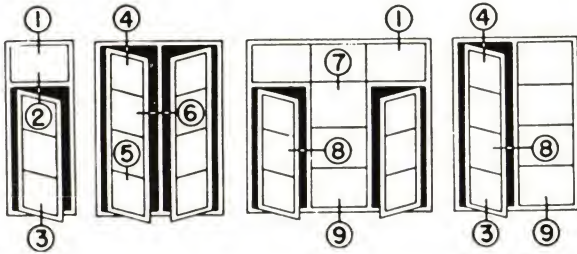
for insulating glazing

Designed for stock sizes of $\frac{1}{2}$ " insulating glass. Supplied with continuous inside glazing strips. Glass setting plates attached to top and bottom of windows for convenient installation.

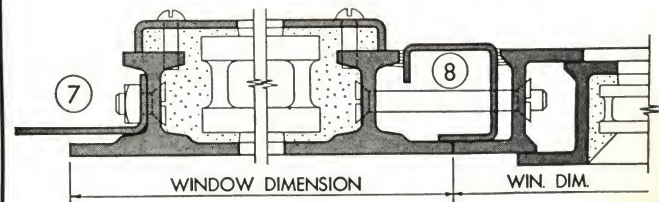
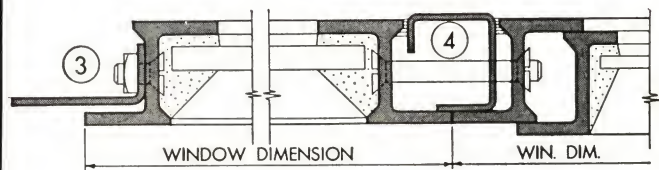
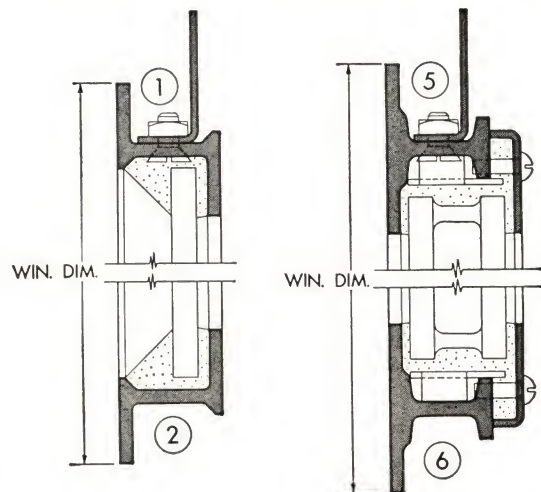
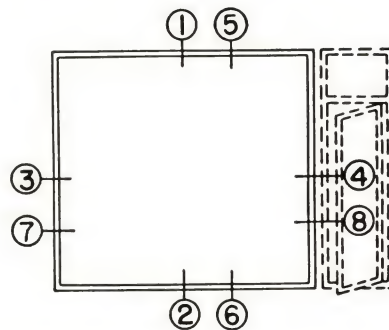


casement windows • half-size sections

key elevations



picture windows • half-size sections



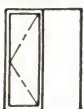
Muntin Variations—Additional architectural treatments may be obtained by omitting muntins from the casements shown on the opposite page. Below are illustrated several variations possible with only two sizes of residence casements.

SMALL WINDOW VARIATIONS

Ventilated Windows



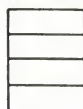
With All Muntins



Muntins Omitted



With All Muntins

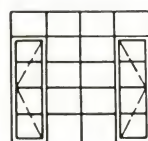


Vertical Muntins Omitted

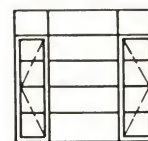


All Muntins Omitted

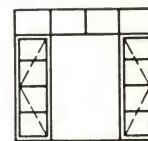
LARGE WINDOW VARIATIONS



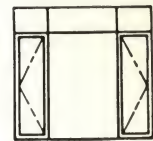
With All Muntins



Center Vertical Muntins Omitted



Horizontal Muntins in Vents Only

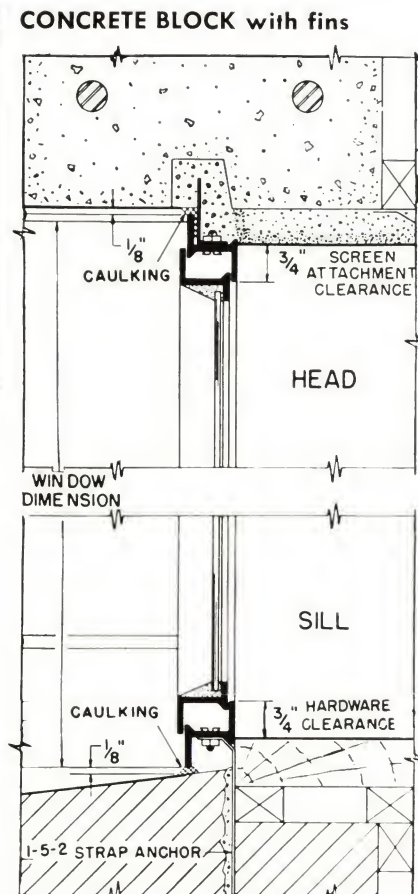
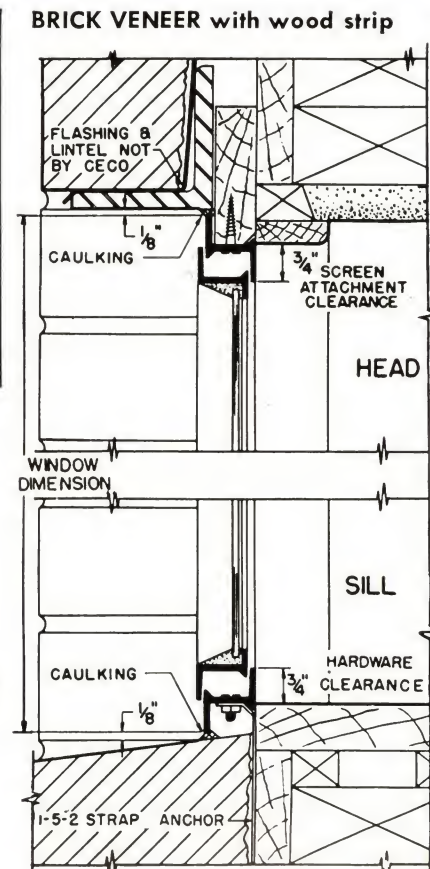
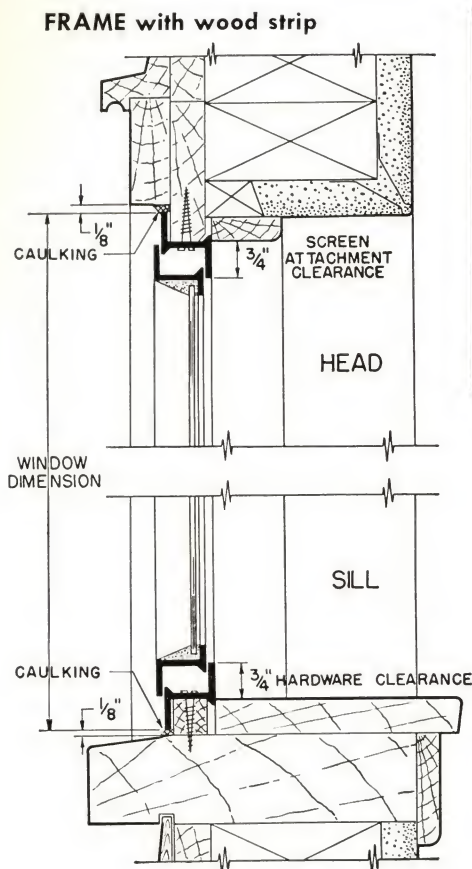
All Muntins Omitted
(Except 2 in transom)

Residence Casements

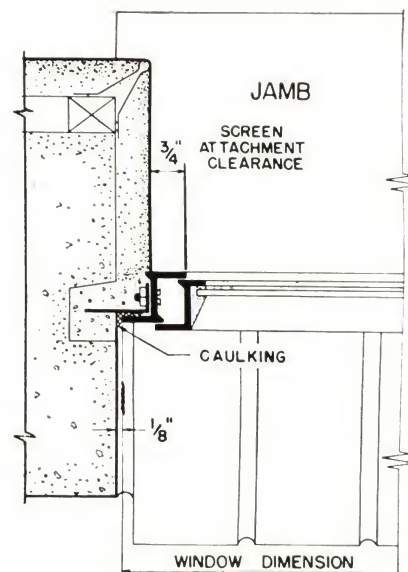
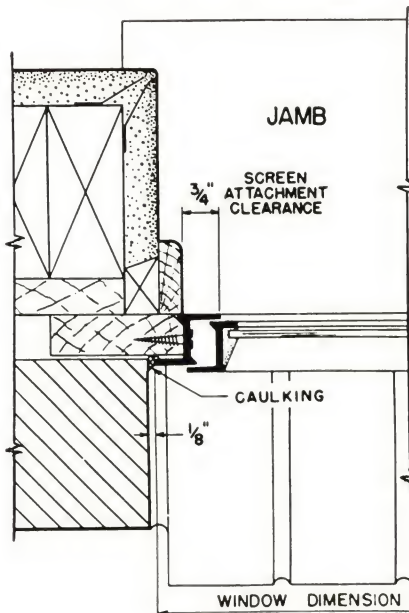
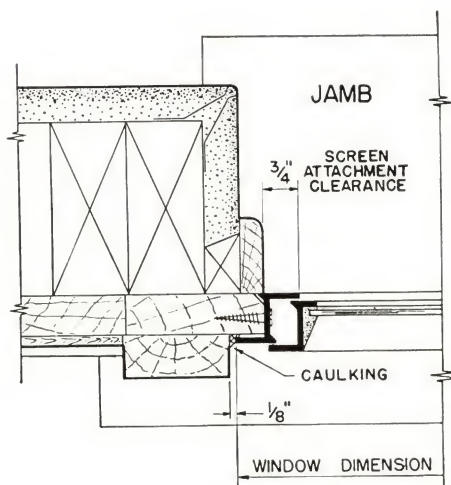
installation details • scale 3" = 1'-0"

The architect has considerable freedom in detailing casement installations beyond the few suggested drawings shown here. Stone sills may be used instead of brick. Structural glass or stone stools may replace wood. • Note that the finished exterior openings are $\frac{1}{4}$ " higher and $\frac{1}{4}$ " wider than the window dimensions, to allow

clearance for installing. In detailing the interior finish, observe the $\frac{3}{4}$ " clearances, needed for application of hardware, screens and storms. • Hardware is shipped in packages. The window erector installs the hardware after erection, final painting and adjustment of the ventilators. Mastic is provided by the window

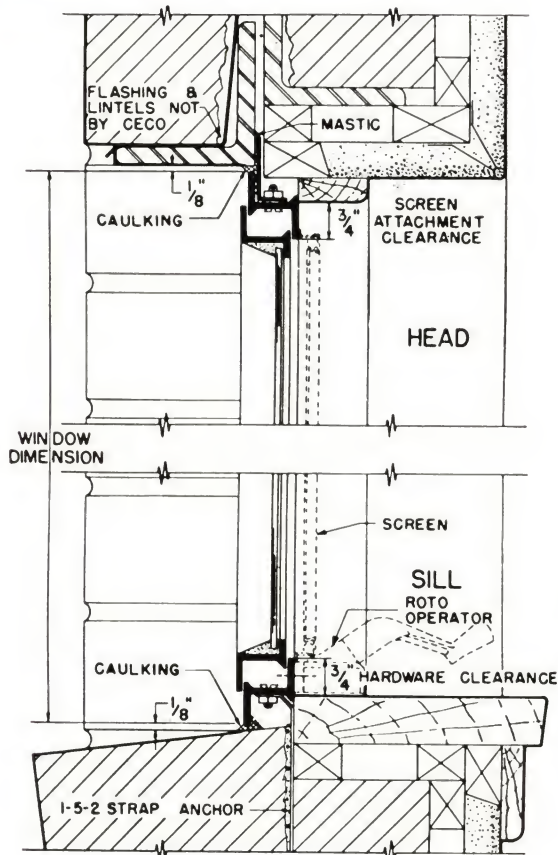


CAULKING TO BE FURNISHED BY OTHERS

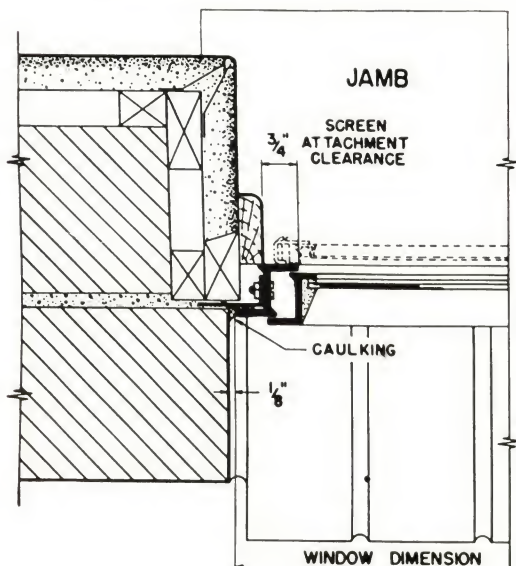


erector but caulking is by other trades. • Fins are shipped loose. Strap anchors are shipped flat so they may be formed by the erector around any sill profile. The bolts and nuts necessary for the attachment of fins and strap anchors are furnished with the windows. Other data available on request.

SOLID BRICK with fins

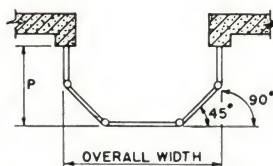


CAULKING TO BE FURNISHED BY OTHERS

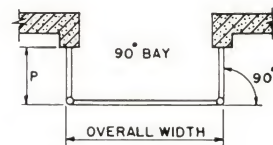


bay and corner mullions

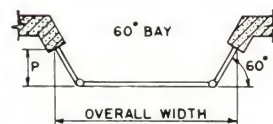
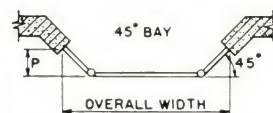
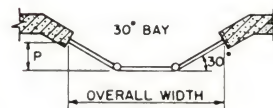
Standard Pipe Mullions furnished by Ceco are not to be used as support members. Load-bearing mullions, furnished by others, are to be of proper size to carry the load. Top and bottom plates should be used with load-bearing mullions. • Pipe mullions are to be drilled in the field by the window erector to match anchor holes in the windows. • Mastic where indicated is to be furnished by the window erector, but caulking is by other trades.



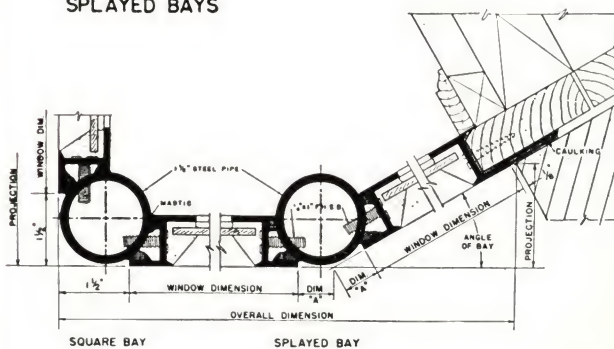
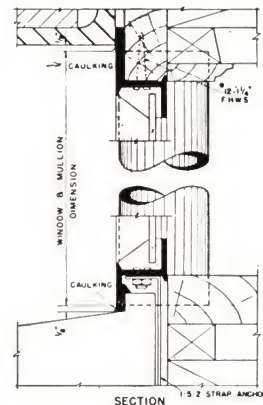
SQUARE SPLAYED BAY



SQUARE BAY



SPLAYED BAYS

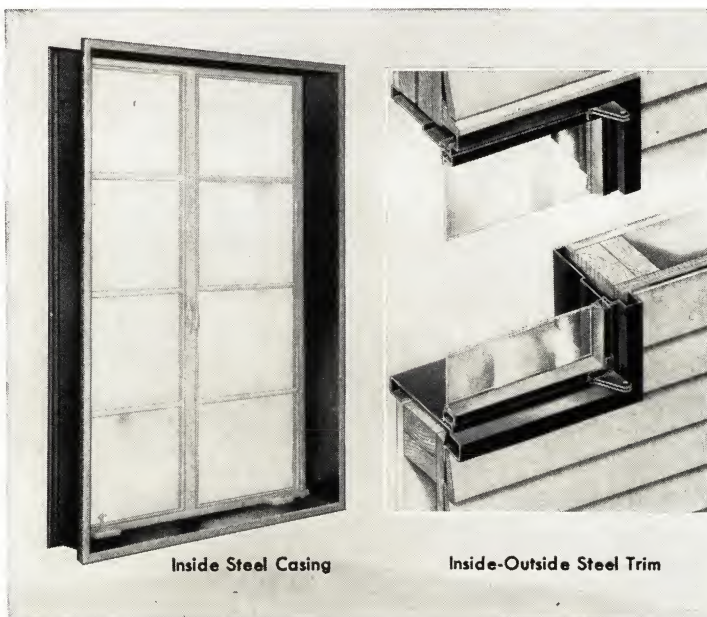


SQUARE BAY

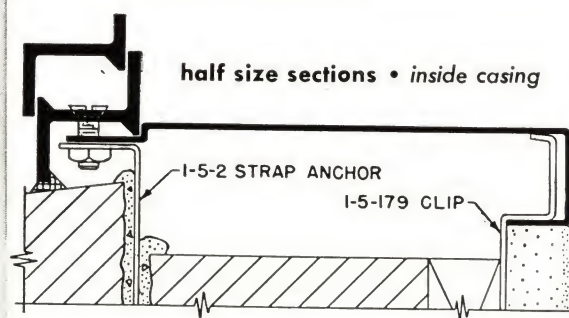
SPLAYED BAY

ANGLE OF BAY	LIGHTS IN RETURN	OVERALL WIDTH			PROJECTION	DIM. "A"
		LIGHTS IN FRONT SECTION				
		2	3	4		
30°	1	6'-1½"	7'-5¼"	8'-9½"	10"	¾"
	2	8'-8¼"	10'-0¼"	11'-4½"	1'-6⅞"	
45°	1	5'-7¼"	6'-11⅜"	8'-3⅜"	1'-2¼"	⅞"
	2	7'-8½"	9'-0⅝"	10'-4⅝"	2'-2⅞"	
60°	1	4'-11¼"	6'-3⅜"	7'-7⅜"	1'-5½"	1"
	2	6'-5½"	7'-9¼"	9'-1½"	2'-9"	
90°	1	3'-4"	4'-8⅞"	6'-0⅝"	1'-8¾"	1½"
	2	3'-4"	4'-8⅞"	6'-0⅝"	3'-2⅞"	
SQUARE SPLAYED	1	5'-8¼"	7'-0⅝"	8'-4⅜"	2'-10⅞"	⅞"
	2	7'-9½"	9'-1⅜"	10'-5⅞"	5'-5⅜"	

Casing and Trim



Ceco Inside Steel Casings and Inside-Outside Trim provide economical and neat finishes for metal casements. They are both available in 4½" and 5¼" depths for use with all standard residence casements and in popular multiple openings. They are adaptable to all kinds of wall construction, in small homes and large housing projects.



inside-outside trim types available

LIGHTS HIGH	LIGHTS WIDE							
	Single Unit Openings					Two Mullion Openings		
	1-Lt.	2-Lts.	3-Lts.	4-Lts.	5-Lts.	5-Lts.	6-Lts.	
2	12	22	32	42	52	131-2	141-2	
3	13	23	33	43	53	131-3	141-3	
4	14	24	34	44	54	131-4	141-4	
5	15	25	35	45	55	131-5	141-5	

Units in bold face figures are warehouse stock types for 5¼" depth only. Nomenclature for Inside-Outside Trim shown above corresponds to the casement units with which they are to be used.
Examples: 23 Inside-Outside Trim is used with a 2313 or 2323 casement. 131-3 Inside-Outside Trim is used with 1313-L casement, 33 fixed window and 1313-R casement.

specifications

GENERAL—All inside-outside trim units shall be manufactured, complete with all necessary anchors, by Ceco Steel Products Corporation.

MATERIAL—Head and Jamb members of inside-outside trim shall be fabricated from 18 gauge steel. Sill members shall be made from 16 gauge steel.

CONSTRUCTION—Inside-outside trim shall be formed to depths of 4½" and 5¼" measured from inside face of window to inside plaster line at the head and jambs. The stool extends ¾" inside. Inside flange of inside-outside trim to be 1" wide. Clip anchors shall be furnished to secure the trim to the wall construction. Inside-outside trim shall provide for mortise and tenon assembly of all four corners.

BONDERIZING AND PAINTING—All inside-outside trim units shall be treated with Bonderite and receive one coat of gray primer paint baked on at 300° F. for not less than one-half hour.

FIELD PAINTING—Immediately upon delivery, and before attachment to windows, inside-outside trim shall be painted by painting contractor with one coat of color selected by the owner and a second coat applied after installation.

ASSEMBLY—Inside-outside trim members shall be accurately fitted and tenons clinched over by erection contractor. The inside-outside trim unit is then to be secured directly to casement by means of sheet metal screws.

NOTE—Shade bracket holes are not provided on standard trim, but can be punched if specified at a slight extra charge.

casings types available

LIGHTS HIGH	LIGHTS WIDE									
	Single Unit Openings					One Mullion Openings		Two Mullion Openings		
	1-Lt.	2-Lts.	3-Lts.	4-Lts.	5-Lts.	4-Lts.	6-Lts.	4-Lts.	5-Lts.	6-Lts.
2	12	22	32	42	52	22-2	33-2	121-2	131-2	141-2
3	13	23	33	43	53	22-3	33-3	121-3	131-3	141-3
4	14	24	34	44	54	22-4	33-4	121-4	131-4	141-4
5	15	25	35	45	55	22-5	33-5	121-5	131-5	141-5

Units in bold face figures are warehouse stock types for 5¼" depth only. Casing nomenclature shown above corresponds to the casement units with which they are to be used. Examples: 23 casing is used with a 2313 or 2323 casement. 131-3 casing is used with 1313-L casement, 33 fixed window & 1313-R casement.

specifications

GENERAL—All inside steel casings shall be manufactured, complete with all necessary anchors, by Ceco Steel Products Corporation.

MATERIAL—Head, Jamb and Sill members of casings shall be fabricated from 18 gauge steel.

CONSTRUCTION—Casings shall be J shaped with depths of 4½" and 5¼" measured from inside face of casement to inside face of casing. Inside face of casing to be 1" wide and finish flush with plaster. Clip anchors shall be furnished to secure the casing to the wall construction. Casings shall provide for mortise and tenon assembly of all four corners.

BONDERIZING AND PAINTING—All casings shall be treated with Bonderite and receive one coat of gray primer paint baked on at 300° F. for not less than one-half hour.

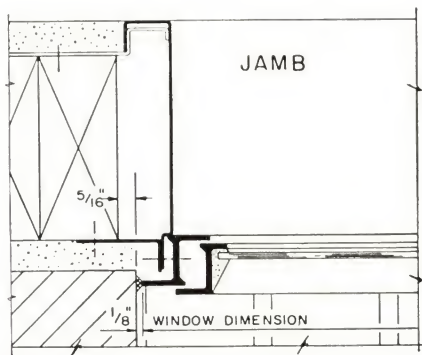
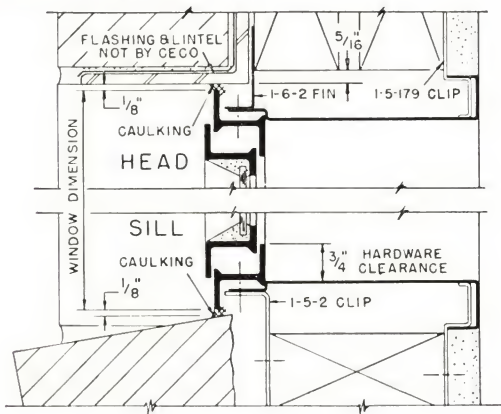
FIELD PAINTING—Immediately upon delivery, and before attachment to windows, casings shall be painted by painting contractor with one coat of color selected by the owner and a second coat applied after installation.

ASSEMBLY—Casing members shall be accurately fitted and tenons clinched over by erection contractor. The casing unit is then to be secured directly to casement by means of bolts and nuts.

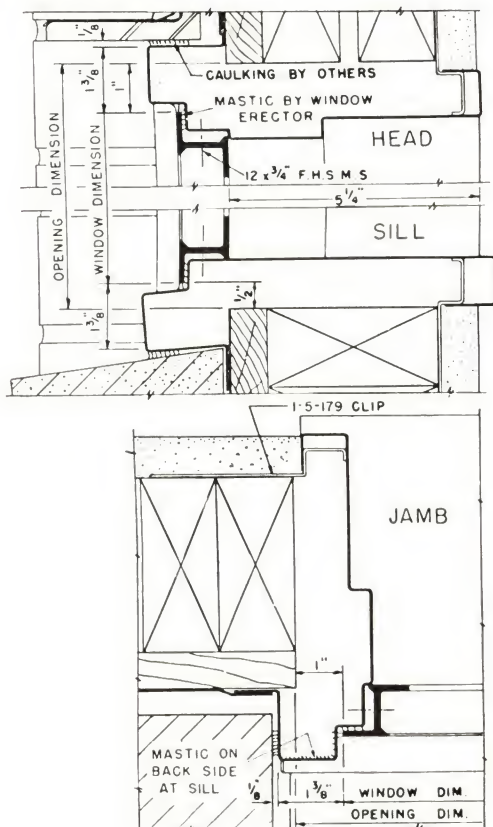
NOTE—Shade bracket holes are not provided on standard casings, but can be punched if specified at a slight extra charge.

installation details • scale 3" = 1'-0"

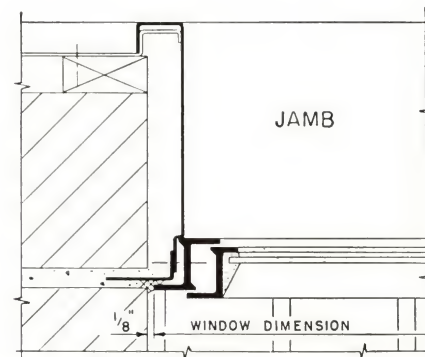
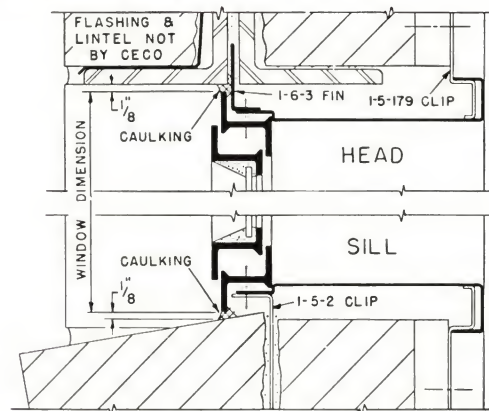
CASING—brick veneer



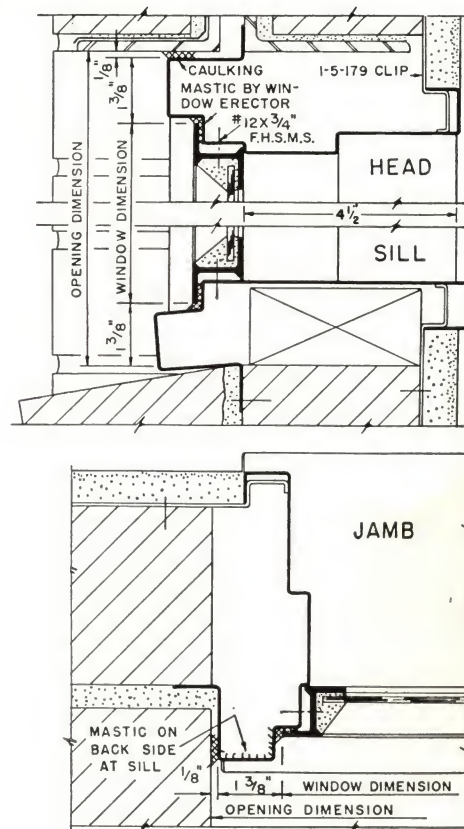
TRIM—brick veneer



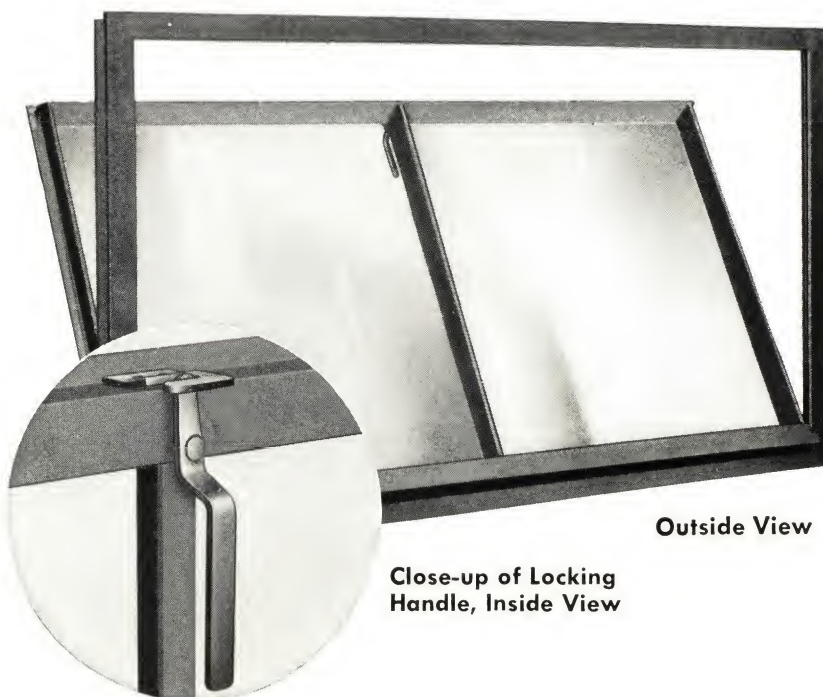
CASING—solid brick



TRIM—solid brick



Ceconomy Basement Windows



Outside View

Close-up of Locking Handle, Inside View

The Ceconomy Basement Window is fabricated from hot rolled steel sections to provide double-contact weathering around the perimeter of the ventilator. Head and jamb bars are T sections. Z-shaped sections are used at the sill.

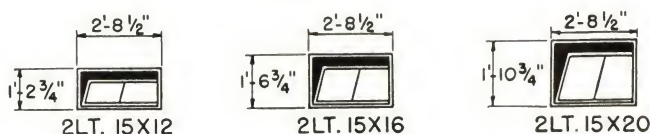
A combination fin and masonry guide, built into the jamb, assures adequate anchorage and prevents the masonry units from crowding the ventilator.

A locking handle at the head locks the ventilator securely. The ventilator is easily removed, without tools, to provide full clearance for passing bulky objects through the window, or in the case of a broken glass—for reglazing. The frame can be erected in place while the ventilator is being glazed.

The ventilator is adjustable—to partial or full ventilating positions. In partial open position, sash deflects air upward, keeps drafts from blowing directly on occupants. In full open position, sash projects into the room at nearly a right angle.

All windows are prepared for screens and storm sash.

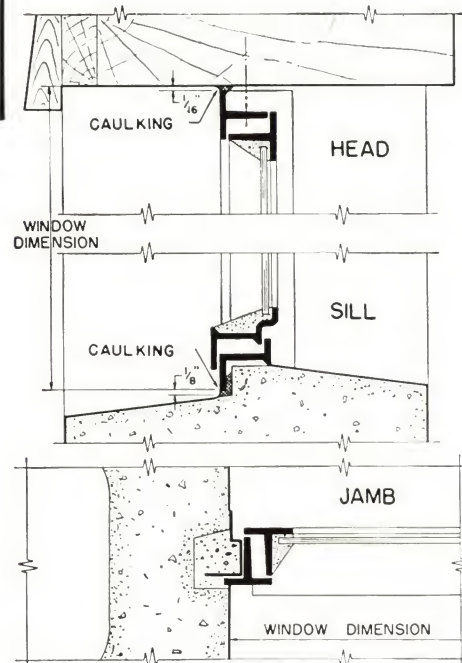
types and sizes for CECONOMY windows



All Ceconomy basement windows are designed for putty glazing with spring wire clips and steel window putty. Glass, putty, glazing clips and glazing by others.

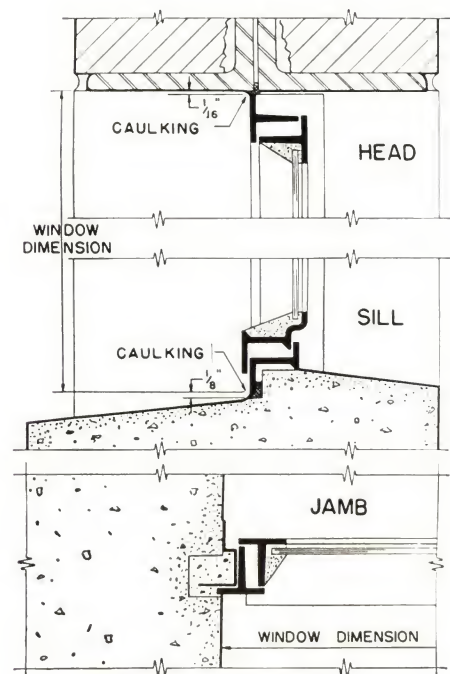
installation details • quarter size

Clearances at the head and jamb must be allowed as detailed. The head clearance is needed to assure easy operation of the ventilator. • Basement windows usually are installed as the foundation is being built, or are slipped into reglets from above.



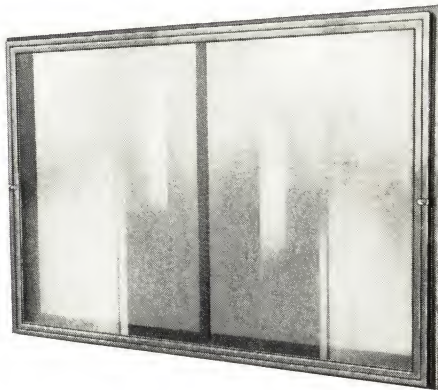
CONCRETE BLOCK

Caulking by others.



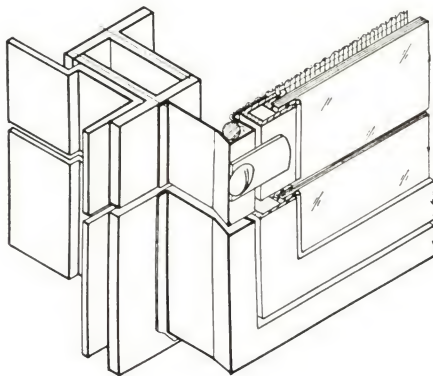
SOLID MASONRY

combination screen and storm window for basement windows

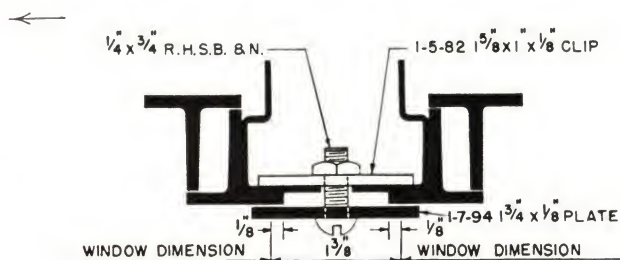


Ceco Combination Screen and Storm Window Units are available for Ceco Basement Windows. The screen is designed to accommodate a glass panel insert, which is quickly installed while the screen is in place. Thus storm window protection can be provided within a few moments—no screen storage problem. The metal frame screen is wired with 18 x 14 mesh bronze screen cloth. The storm panel insert comes complete with glass, glazing-seal, aluminum binder-edge frame and attaching clips and screws.

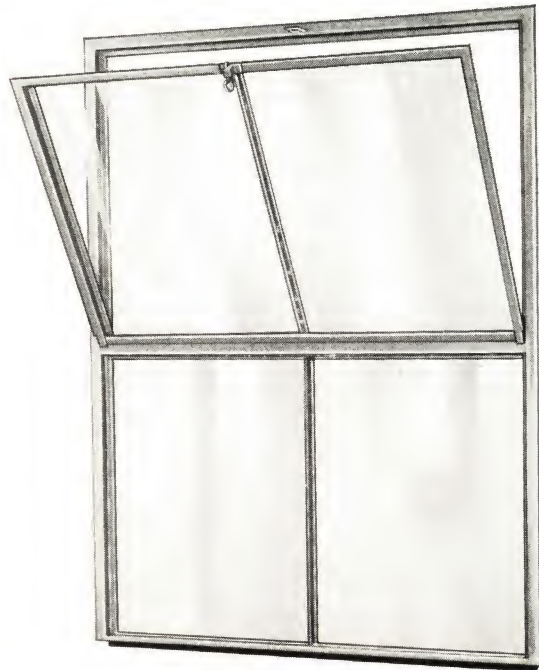
The screen is used also with the Utility window.



vertical mullion • half size



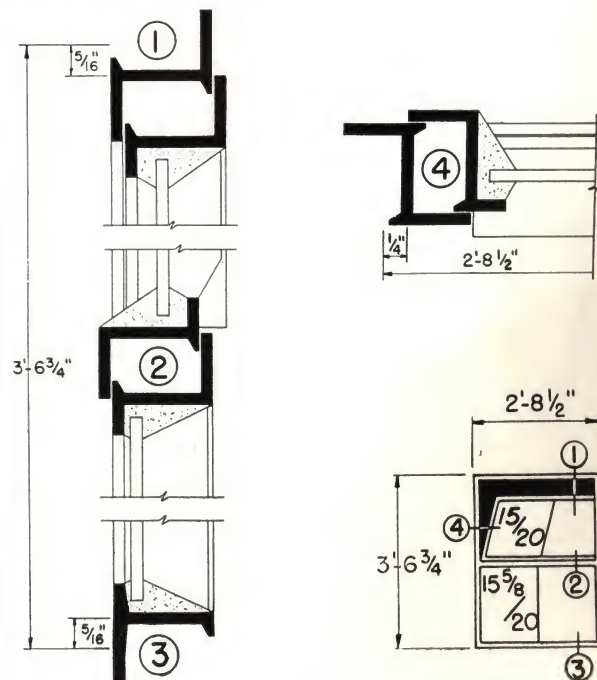
Steel Utility Window



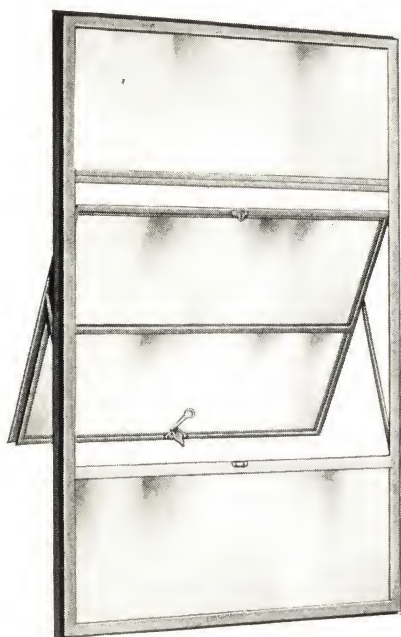
The Ceco Utility Window is especially adapted for use in basement areaways, private and public garages and shops.

It is engineered from the same sections as used for Ceco casements. Two-point weathering provides tight weather-seal. The 15 x 20 basement screen also fits this window. As in the Ceconomy basement window, the ventilator is easy to remove for cleaning or replacing glass by simply lifting one side and sliding out.

half-size sections

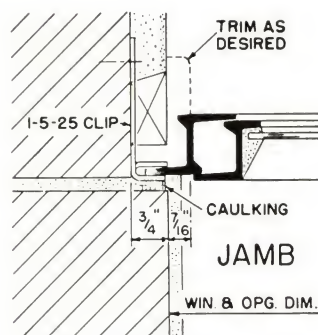
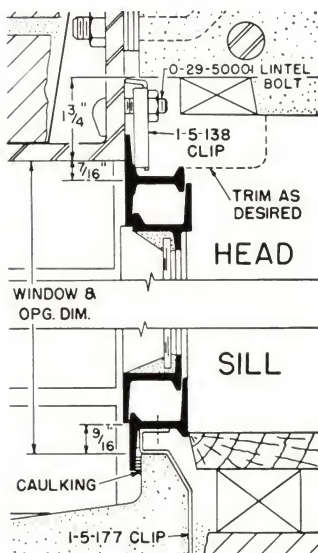


1 1/4" Steel Intermediate Projected Windows



TYPE 424

Ceco 1 1/4" Projected Windows are suitable for schools, hospitals, churches, public buildings, institutions and other architecturally monumental buildings. Simplicity is the keynote in the design of the rigid steel framing members and the attractive modern hardware. • All 1 1/4" Intermediate Windows are prepared for screens. Wicket type screens are standard for project-out ventilators.

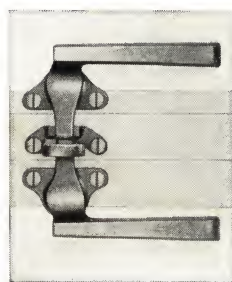


**SOLID BRICK
with concrete spandrel**

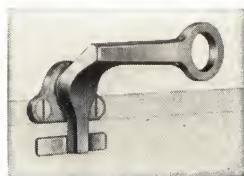
type and sizes (outside views)

2'-0 7/8"	2'-8 7/8"	3'-4 7/8"	4'-0 7/8"	4'-8 7/8"
1' 5"				
461	411	421		
2' 9"				
452A	462A	412A	422A	
452B	462B	412B	422B	
2' 9"				
453	463	413	423	473
4' 1"				
464	414	424	474	
5' 5"				
465	415	425	475	
5' 5"				
466	416	426	476	
6' 9"				
468	418	428	478	
8' 1"				

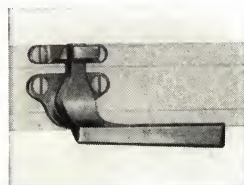
hardware



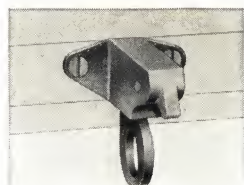
LOCKING HANDLES
Top 1-8-12941
(for project-out ventilator)
Bottom 1-8-13041
(for project-in ventilator)
Keeper 1-8-51441



LOCKING HANDLE
1-8-13141
(for operation with pole)



LOCKING HANDLE
1-8-13041
(for project-in ventilator)
Hook Strike
1-8-51141



SPRING LATCH 1-8-41241
(for project-in ventilator)



POLE RING 1-8-90641
(for project-out ventilator)

All windows shown are warehouse stock types for vented units (outside putty glazed only). Other standard types and sizes are available but not from warehouse stock. Sizes shown are window and masonry opening dimensions.

glass schedule

2'-0 7/8"	2'-8 7/8"	3'-4 7/8"	4'-0 7/8"	4'-8 7/8"
147	148	149	150	151
97	100	34	35	103
97	100	34	35	103
147	148	149	150	151
96	99	17	18	102

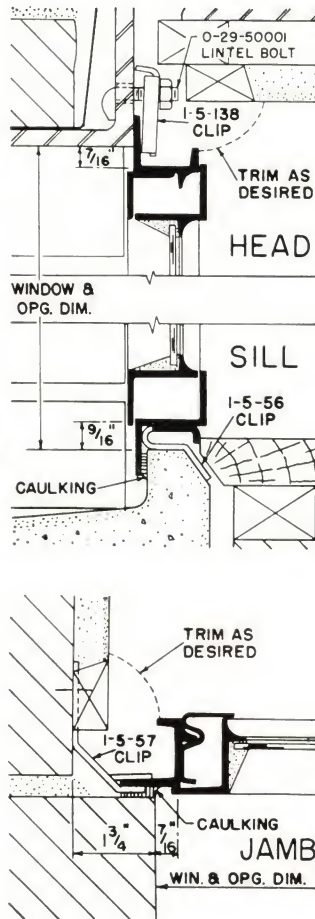
MARK	W	H	MARK	W	H
96	21 3/8	13 3/8	149	39 3/8	15 1/2
97	21 3/8	14 3/8	18	45 3/8	13 3/8
147	23 3/8	15 1/2	35	45 3/8	14 3/8
99	29 3/8	13 3/8	150	47 3/8	15 1/2
100	29 3/8	14 3/8	102	26 3/8	13 3/8
148	31 3/8	15 1/2	103	26 3/8	14 3/8
17	37 3/8	13 3/8	151	27 1/2	15 1/2
34	37 3/8	14 3/8			

Steel Architectural Projected Windows



TYPE 225

Ceco Architectural windows are recommended for schools, public and monumental buildings, and industrial structures where the interior is to be finished. They are fabricated with a rigid channel-shaped frame section. The interior flange of the channel provides a convenient stop on which the trim may be lapped. Weathering members present a flush surface on the inside. • All Architectural windows are prepared for screens. Wicket type screens are standard for project-out ventilators.



BRICK
prepared opening

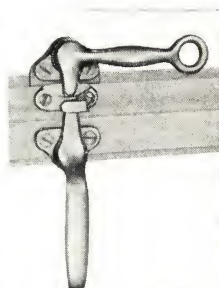
types and sizes (outside views)

2'-0 7/8"	2'-8 7/8"	3'-4 7/8"	4'-0 7/8"	4'-8 7/8"
1'-5"				
261	211	221		
2'-9"				
252A	262A	212A	222A	
2'-9"				
252B	262B	212B	222B	
4'-1"				
253	263	213	223	273
5'-5"				
264	214	224	274	
5'-5"				
265	215	225	275	
6'-9"				
266	216	226	276	
8'-1"				
268	218	228	278	

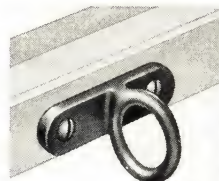
hardware



CAM LOCKING HANDLE
for project-out ventilators
1-8-11621



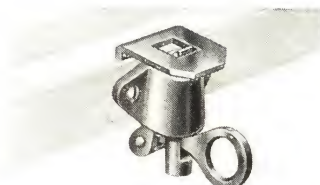
TOP HANDLE
for project-out ventilators
1-8-11721



POLE RING 1-8-90221



BOTTOM HANDLE
for project-in ventilators
1-8-11221



SPRING LOCK 1-8-40521
(for pole operated project-in
ventilators)

KEEPER
1-8-50421

CAM LOCKING HANDLE
for project-in ventilators
1-8-11221

All windows are warehouse stock types for vented units (outside putty glazed only). (Other standard types and sizes also are available but not from warehouse stock.) • Sizes shown are window and masonry opening dimensions.

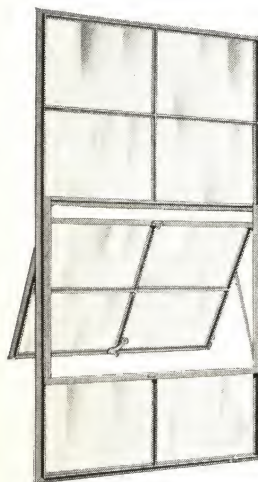
glass schedule

2'-0 7/8"	2'-8 7/8"	3'-4 7/8"	4'-0 7/8"	4'-8 7/8"
98	101	74	75	104
97	100	34	35	103
97	100	34	35	103
98	101	74	75	104
96	99	17	18	102

MARK	W	H	MARK	W	H
17	37 3/8"	13 3/8"	98	23 3/8"	15 3/8"
18	45 3/8"	13 3/8"	99	29 3/8"	13 3/8"
34	37 3/8"	14 3/8"	100	29 3/8"	14 3/8"
35	45 3/8"	14 3/8"	101	31 3/8"	15 3/8"
74	39 3/8"	15 3/8"	102	26 3/8"	13 3/8"
75	47 3/8"	15 3/8"	103	26 3/8"	14 3/8"
96	21 3/8"	13 3/8"	104	27 3/8"	15 3/8"
97	21 3/8"	14 3/8"			

Steel Commercial Projected Windows

Ceco Commercial Projected Steel Windows are constructed of strong, hot-rolled sections which provide two point weathering contact at all ventilator perimeters. Corners of frame and ventilators are riveted mortise and tenon construction. After riveting, all corners of Commercial Projected units are welded for added rigidity. Muntin bar intersections are mechanically interlocked aligning each bar in its exact location. Commercial Projected windows are equipped with hardware of types suitable to meet normal operating conditions and to provide secure locking of vents.



COMMERCIAL PROJECTED WINDOW
type B25141

glass schedule

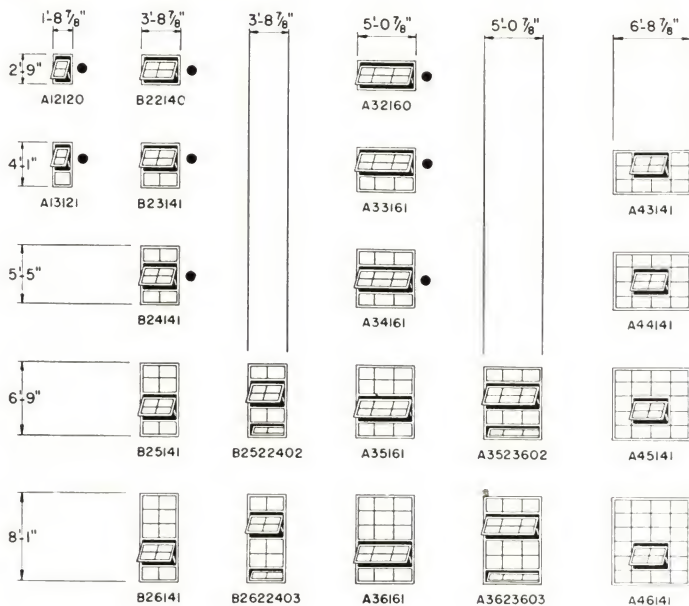
1 1 1 1	1 1 1 1	6 6	1 1 1 1
1 2 2 1	1 4 1	7 7	2 9 2
1 2 2 1	1 4 1	7 7	2 9 2
1 1 1 1	1 1 1 1	6 6	1 1 1 1
1 5 5 1	1 3 1	8 8	5 10 5
"A" UNITS	"A" UNITS	"B" UNITS	"A" UNITS

Prefix "A" denotes 20" x 16" Bar Centers.
Prefix "B" denotes 22" x 16" Bar Centers.

Mark	W	H	Mark	W	H
1	19 5/8	15 5/8	6	21 3/8	15 5/8
2	18 5/8	14 5/8	7	20 5/8	14 5/8
3	17 5/8	13 5/8	8	20 5/8	13 5/8
4	17 5/8	14 5/8	9	19 5/8	14 5/8
5	18 5/8	13 5/8	10	19 5/8	13 5/8

Glass sizes are for guidance only and should be verified on the job.

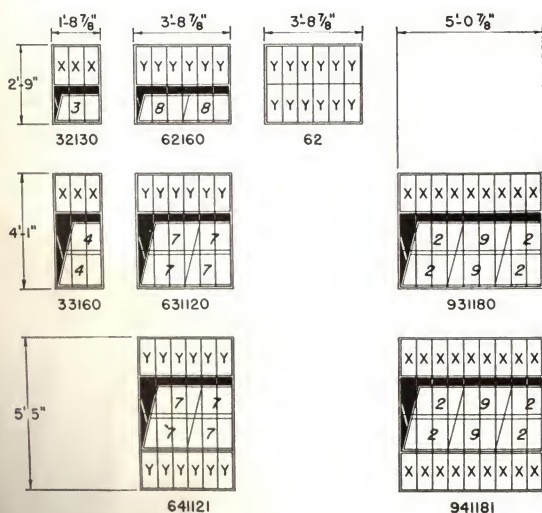
types and sizes



All Commercial Projected windows shown above are warehouse stock types for vented units. Types B22, B23, B24, B25, B26, A32, A33, A34, A35, and A36 are warehouse stock types for fixed units. Single vented Commercial Projected windows marked thus (●) shown to project out are also made as warehouse stock types with vent to project in. Sizes shown are window and masonry opening dimensions. (Other standard types and sizes of projected windows are available but not from warehouse stock.) Screens are available for all Ceco Windows. Screens for projected ventilators of the same size are interchangeable and thus require no identification tags or marks.

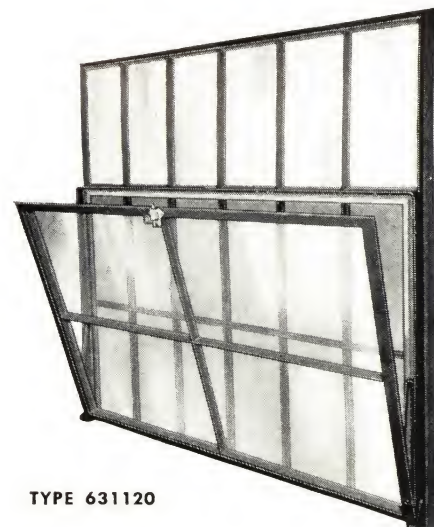
Steel Security Windows

types and sizes



glass schedule

MARK	W	H
2	18 5/8	14 5/8
3	17 5/8	13 5/8
4	17 5/8	14 5/8
7	20 5/8	14 5/8
8	20 5/8	13 5/8
9	19 5/8	14 5/8
X	6 1/4	15 5/8
Y	7	15 5/8



TYPE 631120

Security Windows are used in store buildings, warehouses and other buildings where ventilation is required and burglary protection is important. Grille openings in front of ventilators

are left unglazed. Windows are prepared for the installation of screens.

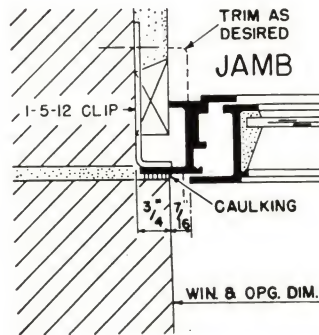
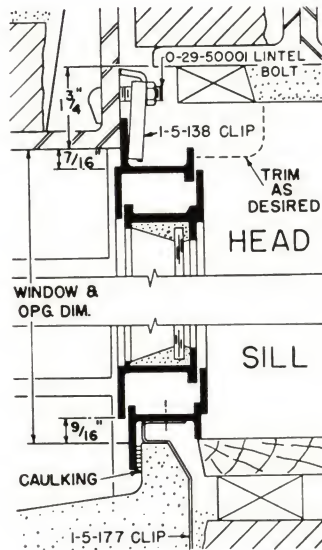
All sizes are warehouse stock types for prompt shipment.

Aluminum Projected Windows



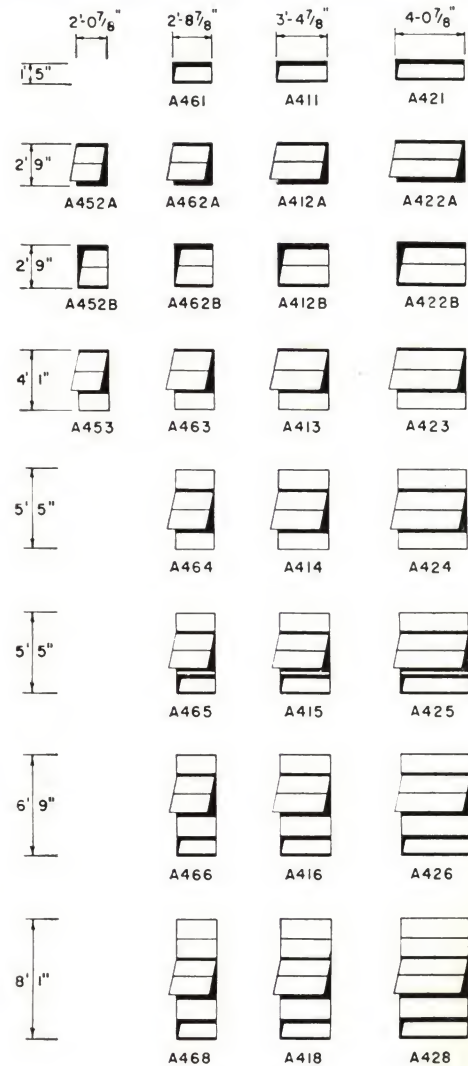
TYPE A464

Here is another new group of Ceco windows, in a full range of warehouse sizes, which broaden the line of quality window products available from Ceco. These carefully engineered windows are suitable for schools, hospitals, public buildings, churches and other institutional and monumental buildings. The handsome hardware has been designed in keeping with modern functional thinking. • All Aluminum Projected Windows are prepared for screens. Wicket type screens are standard for project-out ventilators.

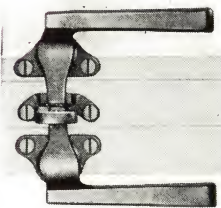


SOLID BRICK
prepared opening

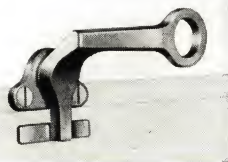
types and sizes (outside views)



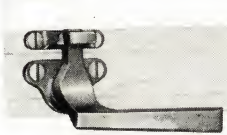
hardware



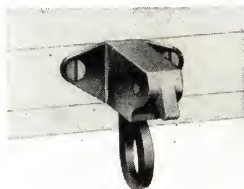
LOCKING HANDLES
Top 2-8-10135
(for project-out vent.)
Bottom 2-8-10235
(for project-in vent.)
Keeper 2-8-50135



LOCKING HANDLE
2-8-10335
(for project-out vent, not
located above another
vent.)



LOCKING HANDLE
2-8-10235
(for project-in vent.)
Hook Strike
2-8-50235



SPRING LATCH 2-8-40135
(for project-in vent.)



POLE RING 2-8-90135
(for project-out vent.)

These windows, with ventilators as shown, are all warehouse stock types, and are for outside mastic glazing. Other standard types and sizes are available but not from warehouse stock. Sizes are window and opening dimensions.

glass schedule

2'-0 7/8"	2'-8 7/8"	3'-4 7/8"	4'-0 7/8"
A	B	CC	EE
F	G	HH	KK
F	G	HH	KK
A	B	CC	EE
L	M	NN	QQ

Mark	W	H	Mark	W	H
A	23 3/8	15 5/8	CC	39 3/8	15 5/8
B	31 3/8	15 5/8	EE	47 3/8	15 5/8
F	21 1/8	14 3/8	HH	37 3/8	14 3/8
G	29 5/8	14 3/8	KK	45 5/8	14 3/8
L	21 1/8	13 3/8	NN	37 3/8	13 3/8
M	29 5/8	13 3/8	QQ	45 5/8	13 3/8

Aluminum Residential Windows • series 50-B



Outside view of CECO-Sterling 50-B Aluminum Double-Hung Window, Type H

Standard types and sizes of CECO-Sterling 50-B Residential windows offer a great variety of choice to the designer. These standard types and sizes should be specified to take advantage of economical manufacture. In addition, glazing costs are reduced because standard glass lights are carried in dealer stocks. The designer should know that these residential windows can be incorporated in 4" modular planning as developed by ASA Project A62 sponsored by American Institute of Architects and the Producers' Council.

features

- Corners of frame and sash are welded.
- Built-in invisible balances permit sash to be operated smoothly.
- Unique design—in multiple openings, these windows are readily assembled because the frames interlock, eliminating the need for additional and costly mullions. Interlocking jambs reduce the mullion sight lines, affording more light area in the window opening. Special extruded corner mullions are available for 45° and 90° corner installations.
- Flush muntin construction on interior makes windows easy to clean.
- CECO-Sterling residential windows are prepared for screens and storm windows.

CECO-STERLING WINDOWS MEET ALL FHA REQUIREMENTS. In many regions CECO-Sterling Screens and Storm Sash may also be included under FHA financing.

types and sizes

• type H

Type H windows contain horizontal muntins in top and bottom sash.

INSIDE ROUGH OP. OUTSIDE OP. W.D.	2'-1 ³ / ₄ "		2'-5 ³ / ₄ "		2'-9 ³ / ₄ "		3'-1 ³ / ₄ "		3'-5 ³ / ₄ "		3'-9 ³ / ₄ "	
	2'-0 ¹ / ₂ "		2'-4 ¹ / ₂ "		2'-8 ¹ / ₂ "		3'-0 ¹ / ₂ "		3'-4 ¹ / ₂ "		3'-8 ¹ / ₂ "	
* GLASS SIZE	20 ¹ / ₄ x 7 ⁷ / ₈		24 ¹ / ₄ x 7 ⁷ / ₈		28 ¹ / ₄ x 7 ⁷ / ₈		32 ¹ / ₄ x 7 ⁷ / ₈					
3'-2 ¹ / ₂ "	20H16		24H16		28H16		32H16					
* GLASS SIZE	20 ¹ / ₄ x 9 ⁷ / ₈		24 ¹ / ₄ x 9 ⁷ / ₈		28 ¹ / ₄ x 9 ⁷ / ₈		32 ¹ / ₄ x 9 ⁷ / ₈		36 ¹ / ₄ x 9 ⁷ / ₈			
3'-10 ¹ / ₂ "	20H20		24H20		28H20		32H20		36H20			
* GLASS SIZE	20 ¹ / ₄ x 11 ⁷ / ₈		24 ¹ / ₄ x 11 ⁷ / ₈		28 ¹ / ₄ x 11 ⁷ / ₈		32 ¹ / ₄ x 11 ⁷ / ₈		36 ¹ / ₄ x 11 ⁷ / ₈		40 ¹ / ₄ x 11 ⁷ / ₈	
4'-6 ¹ / ₂ "	20H24		24H24		28H24		32H24		36H24		40H24	
* GLASS SIZE	20 ¹ / ₄ x 13 ⁷ / ₈		24 ¹ / ₄ x 13 ⁷ / ₈		28 ¹ / ₄ x 13 ⁷ / ₈		32 ¹ / ₄ x 13 ⁷ / ₈		36 ¹ / ₄ x 13 ⁷ / ₈		40 ¹ / ₄ x 13 ⁷ / ₈	
5'-2 ¹ / ₂ "	20H28		24H28		28H28		32H28		36H28		40H28	

* BASED ON 3/4" STUOL

• type C

Type C have horizontal and vertical muntins in top and bottom sash.

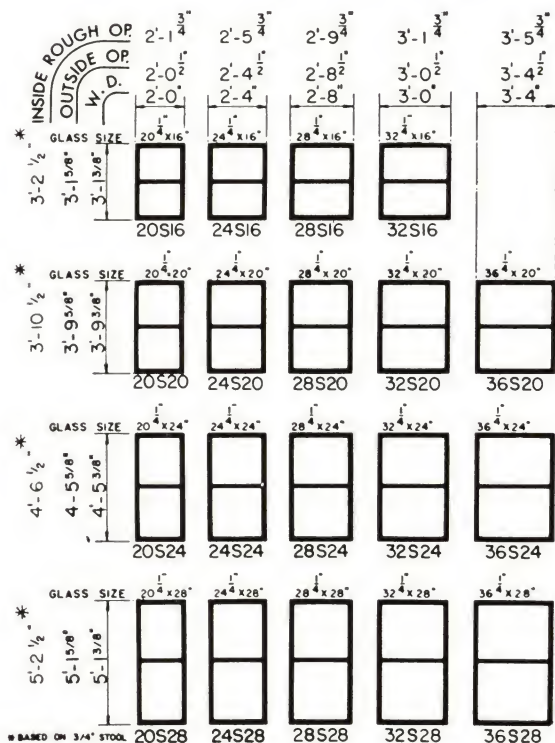
INSIDE ROUGH OP. OUTSIDE OP. W.D.	2'-1 ³ / ₄ "		2'-5 ³ / ₄ "		2'-9 ³ / ₄ "		3'-1 ³ / ₄ "		3'-5 ³ / ₄ "		3'-9 ³ / ₄ "	
	2'-0 ¹ / ₂ "		2'-4 ¹ / ₂ "		2'-8 ¹ / ₂ "		3'-0 ¹ / ₂ "		3'-4 ¹ / ₂ "		3'-8 ¹ / ₂ "	
* GLASS SIZE	10 ¹ / ₄ x 7 ⁷ / ₈		10 ¹ / ₄ x 9 ⁷ / ₈		10 ¹ / ₄ x 11 ⁷ / ₈		10 ¹ / ₄ x 13 ⁷ / ₈		11 ¹ / ₄ x 9 ⁷ / ₈		11 ¹ / ₄ x 11 ⁷ / ₈	
3'-2 ¹ / ₂ "	20C16		24C16		28C16		32C16					
* GLASS SIZE	10 ¹ / ₄ x 9 ⁷ / ₈		10 ¹ / ₄ x 11 ⁷ / ₈		10 ¹ / ₄ x 13 ⁷ / ₈		11 ¹ / ₄ x 9 ⁷ / ₈		11 ¹ / ₄ x 11 ⁷ / ₈		11 ¹ / ₄ x 13 ⁷ / ₈	
3'-10 ¹ / ₂ "	20C20		24C20		28C20		32C20		36C20			
* GLASS SIZE	10 ¹ / ₄ x 11 ⁷ / ₈		10 ¹ / ₄ x 13 ⁷ / ₈		11 ¹ / ₄ x 9 ⁷ / ₈		11 ¹ / ₄ x 11 ⁷ / ₈		11 ¹ / ₄ x 13 ⁷ / ₈		13 ¹ / ₄ x 9 ⁷ / ₈	
4'-6 ¹ / ₂ "	20C24		24C24		28C24		32C24		36C24		40C24	
* GLASS SIZE	10 ¹ / ₄ x 13 ⁷ / ₈		11 ¹ / ₄ x 9 ⁷ / ₈		11 ¹ / ₄ x 11 ⁷ / ₈		11 ¹ / ₄ x 13 ⁷ / ₈		13 ¹ / ₄ x 9 ⁷ / ₈		13 ¹ / ₄ x 11 ⁷ / ₈	
5'-2 ¹ / ₂ "	20C28		24C28		28C28		32C28		36C28		40C28	

* BASED ON 3/4" STUOL

Series 50-B Windows are also available as standard in 5'-9³/₄" (#32) window→

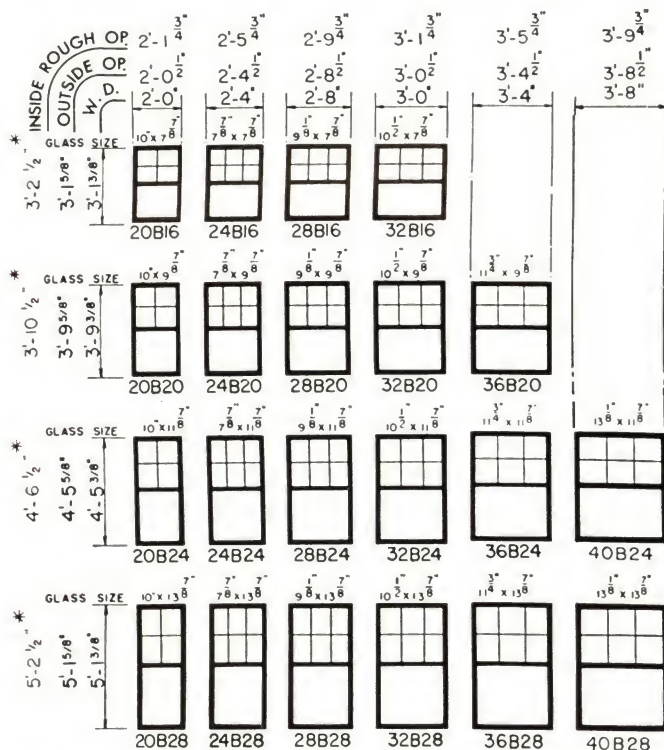
• type S

Type S windows have no muntins in either upper or lower sash.



• type B

Type B have horizontal and vertical muntins in upper sash only.



specifications

CECO-STERLING ALUMINUM DOUBLE-HUNG WINDOWS

SERIES No. 50-B shall be furnished in standard types and sizes completely assembled with weather-stripping and hardware attached. Sash shall be hung and adjusted for single or double strength glass. Glazing clips, anchors and mullion screws shall be supplied by manufacturer. All windows shall be drilled for shade brackets. Frame head bar of window shall be drilled for storm sash brackets when specified.

MATERIALS—Window frames and sash members shall be extruded 6063-T5 alloy sections not less than .062" thick. Performance shall comply with requirements of DH-A1 Specifications of the Aluminum Window Manufacturers Association as published in "Sweet's File, Architectural," latest edition.

CONSTRUCTION—Joints of both frame and sash members shall be welded and muntin bars firmly secured at cross joints and to abutting sash sections. Connections between sill and side frame members shall be watertight. Sash shall be designed for outside glazing.

WEATHERSTRIPPING—Stainless steel weatherstripping designed for attaching to jamb bars of sash, and to head, sill, and meeting rail members, shall be provided.

AIR INFILTRATION—The amount of air infiltration shall not exceed 1/2 cubic foot per minute per foot of sash perimeter when subjected to a wind velocity of 25 miles per hour.

HARDWARE—Windows shall be equipped with sash lock, keeper, and pulldown with balances concealed in jamb rails of sash. Balancing mechanisms shall be easily accessible and permit sash to operate freely.

FINISH—Exposed surfaces of aluminum frames and sash shall be mill finished, cleaned to make them reasonably uniform in color, free from scratches and other serious surface blemishes.

PROTECTIVE COATING—Before shipment from factory, windows shall be given a coating of clear water-white methacrylate-type lacquer on exposed surfaces in accordance with the Aluminum Window Manufacturers Association Specification DH-A1. Lacquer shall withstand the action of lime mortar for a period of at least one month in an atmosphere of 100% relative humidity at room temperature and shall be a type to which glazing compound will adhere.

SCREENS—Extruded or rolled frame sections, mill finish, and wired with aluminum wire cloth shall be furnished in standard sizes with necessary hardware attached to apply screen to windows. Screens shall consist of full or half panels to allow half or full-length screening as specified.

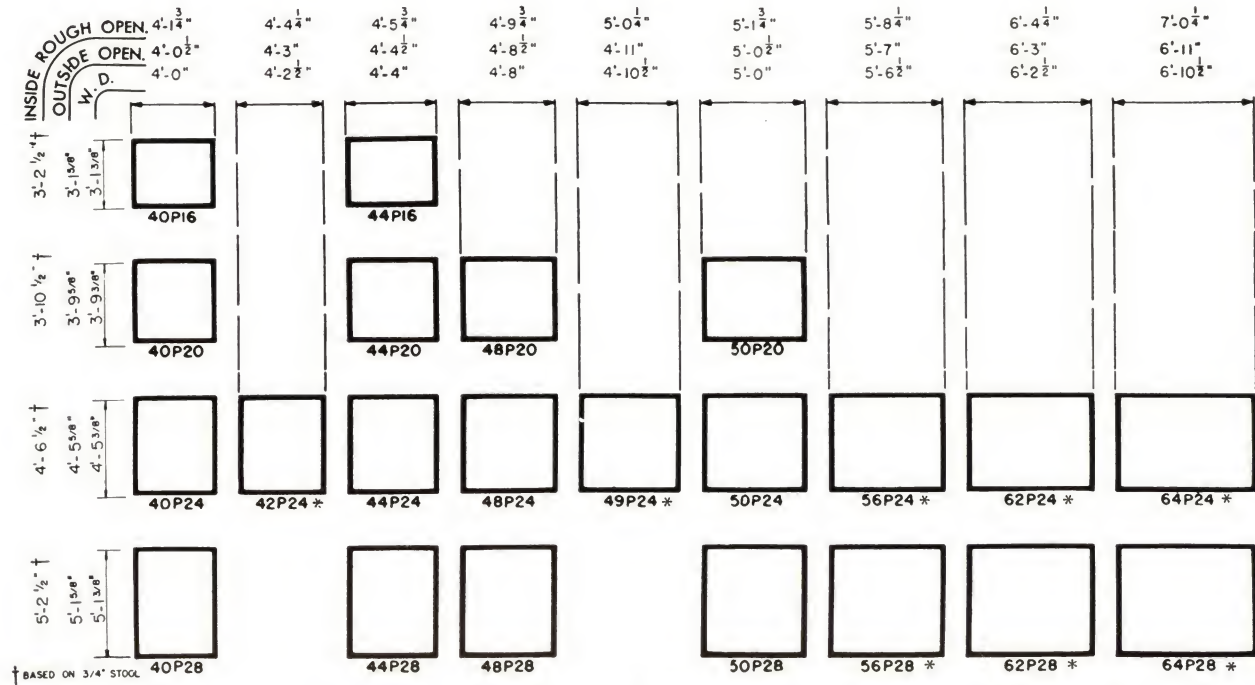
STORM SASH—Extruded frame sections, mill finish, and glazed shall be furnished in standard sizes to fit windows. Glass shall be set in plastic seal. All points of contact with window frame shall have insulation. Frame shall be mechanically joined for easy reglazing. Storm sash shall be of two-panel design with arms for bottom panel ventilation. Upper panel shall be designed for use with lower screen panel. All installation hardware shall be furnished.

PICTURE WINDOWS—Shall be furnished in standard types and sizes unglazed and shipped knocked-down. Frame sections shall be prepared for inside glazing bead for single or double glazing as specified. Necessary assembly accessories and installation hardware shall be provided by manufacturer. Materials shall be of the same quality and finish as specified for double-hung windows.

ERECTION—CAULKING—GLAZING (BY OTHERS)—Windows shall be set straight, plumb, level and securely anchored in accordance with standard installation details supplied by manufacturer. Windows shall be caulked and glazed by others with an approved glazing compound.

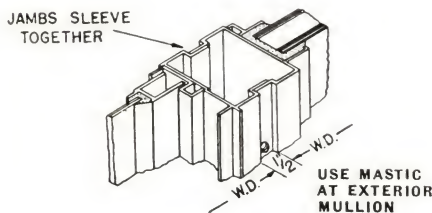
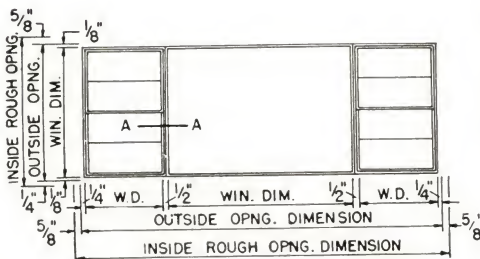
Aluminum Residential Windows • series 50-B

picture windows • types and sizes



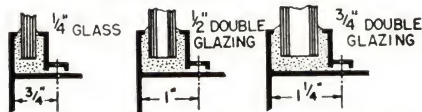
Picture Windows are also available as standard in 5'9 3/8" #32 window height dimension, in same standard widths as #28 height. Example: 40P32. Other sizes than those shown may be specially ordered.

• combining picture and DH windows



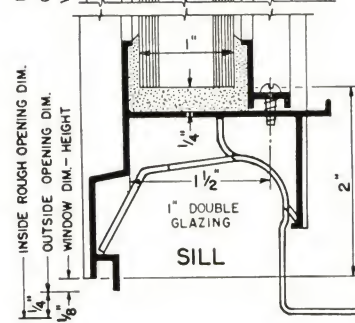
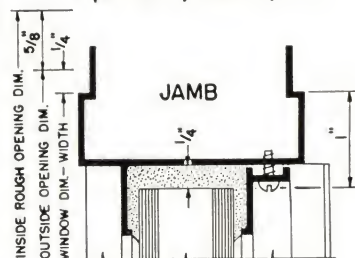
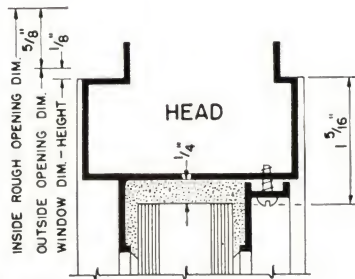
SECTION A-A

OTHER GLAZING CONDITIONS



NOTE: ORDERS SHOULD SPECIFY GLASS THICKNESS.

• half-size details



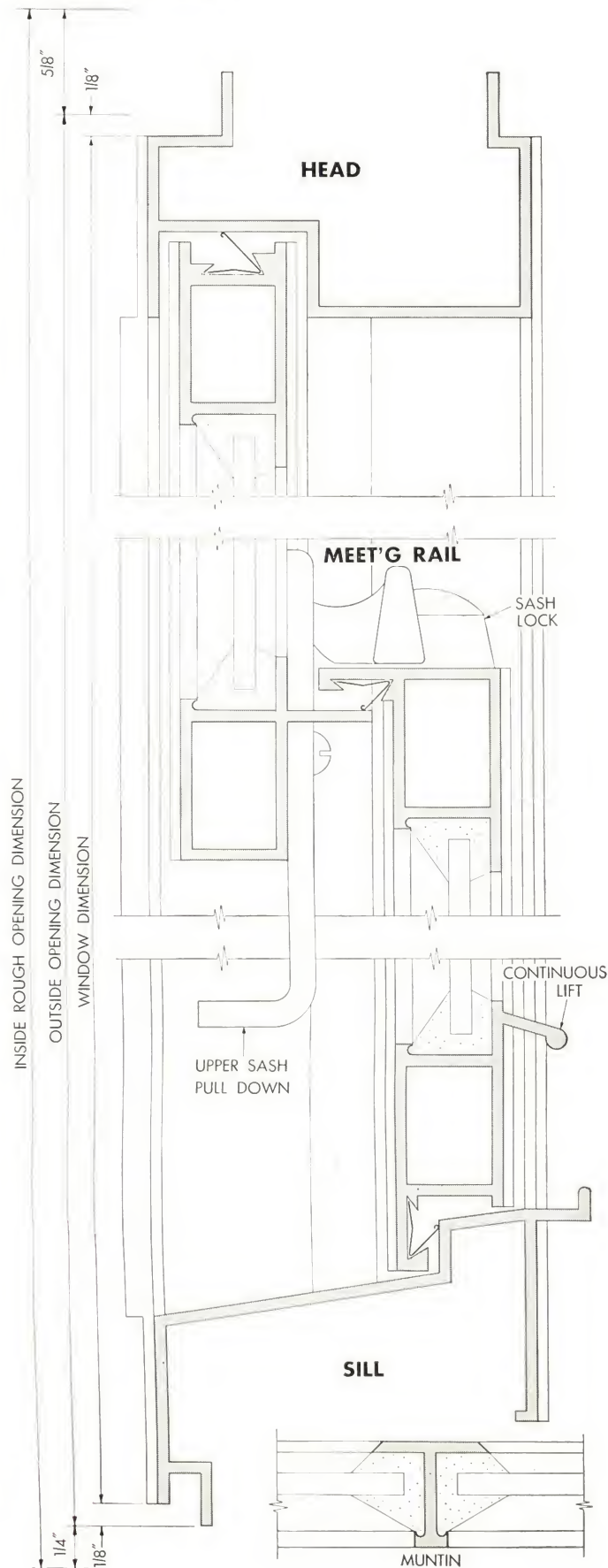
• glass sizes

Type	Single glass	Double glass
40P16	46 1/4 x 34 1/4	46 x 34
44P16	50 1/4 x 34 1/4	50 x 34
40P20	46 1/4 x 42 1/4	46 x 42
44P20	50 1/4 x 42 1/4	50 x 42
48P20	54 1/4 x 42 1/4	54 x 42
50P20	58 1/4 x 42 1/4	58 x 42
40P24	46 1/4 x 50 1/4	46 x 50
*42P24	48 3/4 x 50 1/4	48 1/2 x 50
44P24	50 1/4 x 50 1/4	50 x 50
48P24	54 1/4 x 50 1/4	54 x 50
*49P24	56 3/4 x 50 1/4	56 1/2 x 50
50P24	58 1/4 x 50 1/4	58 x 50
*56P24	64 3/4 x 50 1/4	64 1/2 x 50
*62P24	72 3/4 x 50 1/4	72 1/2 x 50
*64P24	80 3/4 x 50 1/4	80 1/2 x 50
40P28	46 1/4 x 58 1/4	46 x 58
44P28	50 1/4 x 58 1/4	50 x 58
48P28	54 1/4 x 58 1/4	54 x 58
50P28	58 1/4 x 58 1/4	58 x 58
*56P28	64 3/4 x 58 1/4	64 1/2 x 58
*62P28	72 3/4 x 58 1/4	72 1/2 x 58
*64P28	80 3/4 x 58 1/4	80 1/2 x 58
40P32	46 1/4 x 66 1/4	46 x 66
44P32	50 1/4 x 66 1/4	50 x 66
48P32	54 1/4 x 66 1/4	54 x 66
50P32	58 1/4 x 66 1/4	58 x 66
*56P32	64 3/4 x 66 1/4	64 1/2 x 66
*62P32	72 3/4 x 66 1/4	72 1/2 x 66
*64P32	80 3/4 x 66 1/4	80 1/2 x 66

Picture Windows are engineered to receive 1/4" single glass or 1/2", 3/4" or 1" insulating glass. Always specify glass thickness.

*These sizes accommodate standard Thermopane and Twindow glass sizes.

full-size sections



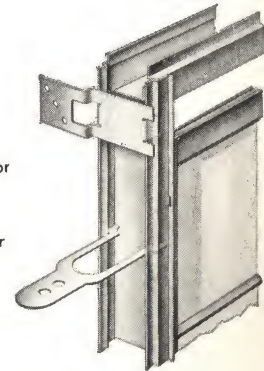
features

• anchors

Alternate jamb anchors are available for Ceco-Sterling Aluminum Residential Windows, Series 50-B. The Standard Anchor is ordinarily furnished, but the special Masonry Anchor is furnished when specified. Head and sill anchors are furnished as shown on the installation details.

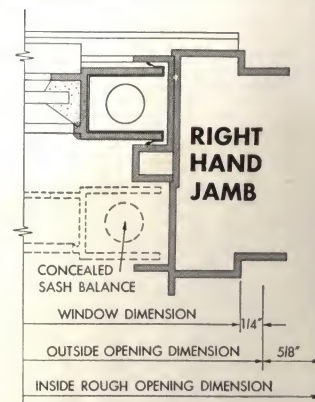
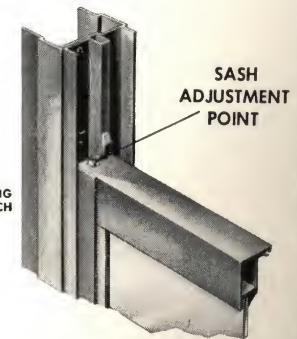
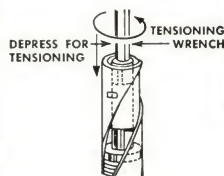
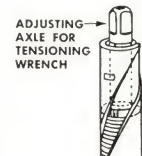
Standard anchor

Masonry anchor



• balances

Sash balances are concealed in the sash jacks. All balance adjustment points are easily accessible at the top of the sash, as shown in the illustration below.



JAMB (half-size)

Aluminum Residential Windows • series 50-B

installation details • scale 3" = 1'-0"

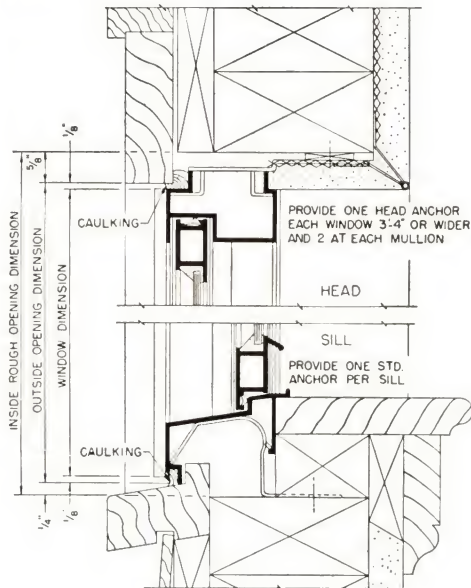
Note the finished exterior openings are $\frac{1}{4}$ " higher and $\frac{1}{2}$ " wider than the window dimensions to allow clearance for installing. • The architect has freedom in detailing double-hung installations beyond the few suggested in the drawings shown here. Stone sills can be used instead of brick. Structural glass or stone stools may replace wood. • Note that caulking is by other trades. • All necessary anchors, glazing clips and mullion screws are shipped with the windows. • On all masonry construction special masonry jamb anchors are supplied as dotted in on the details for Concrete Block Construction on page 21. • Exterior Fin and Trim and

Brick Molds are shipped separately from the windows (see p. 22).

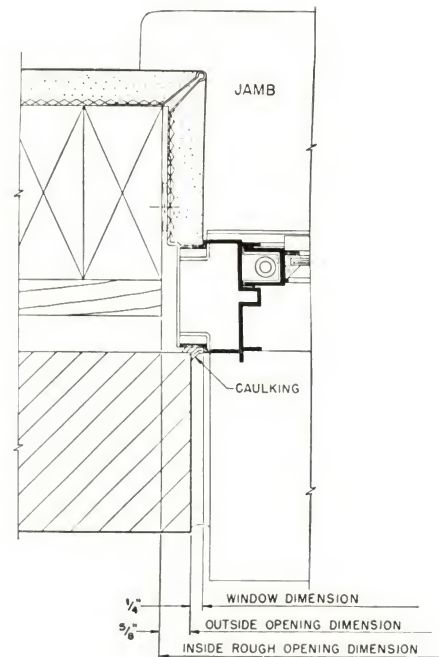
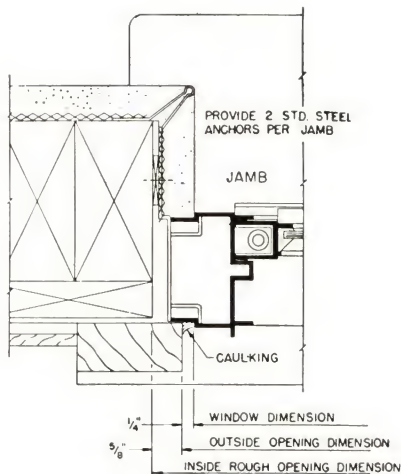
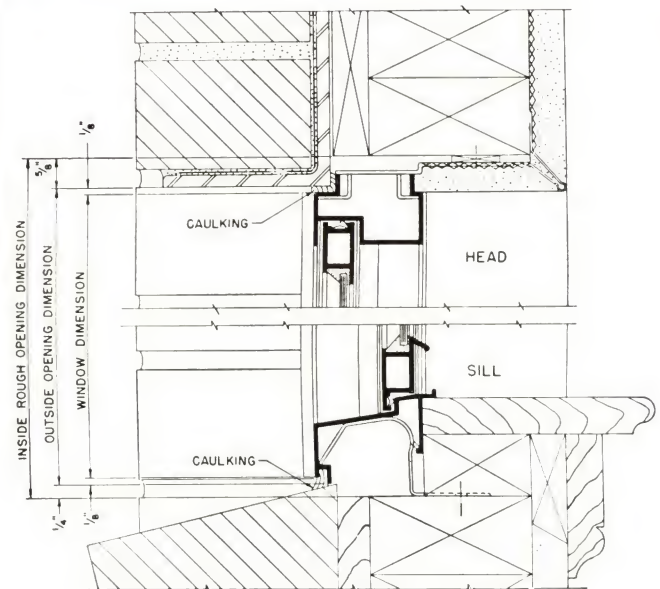
For single units, the inside rough opening width dimension is the window dimension, as shown on pages 16 and 17, plus $1\frac{1}{4}$ ". (The added $1\frac{1}{4}$ " is the sum of the $\frac{5}{8}$ " clearances needed at each of the two jambs.)

For multiple units, the inside rough opening width dimension is the sum of the window dimensions, as shown on pages 16 and 17, plus $\frac{1}{2}$ " for each mullion, plus $1\frac{1}{4}$ ". (Inside Steel Casing details available on request.)

FRAME

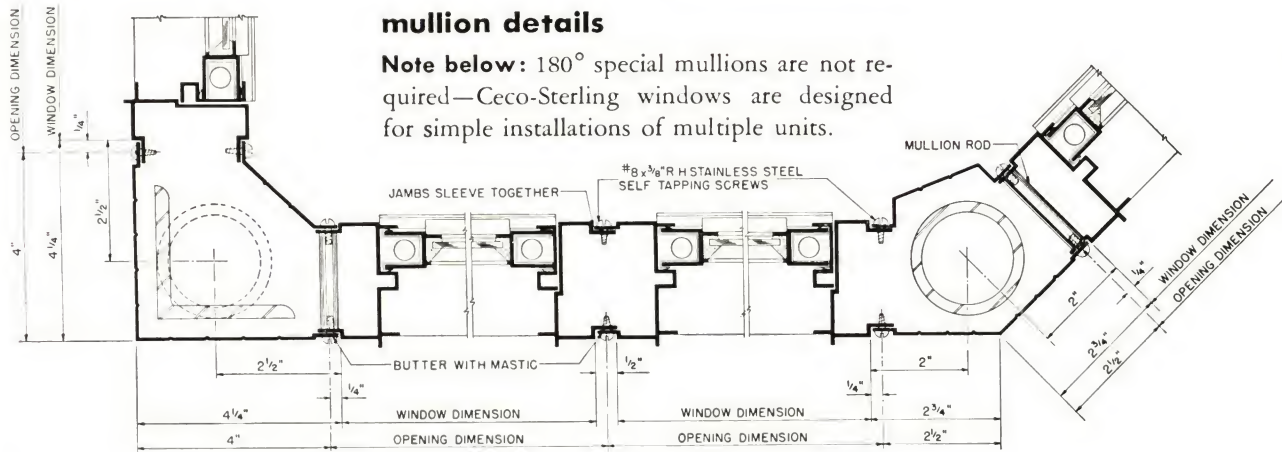


BRICK VENEER

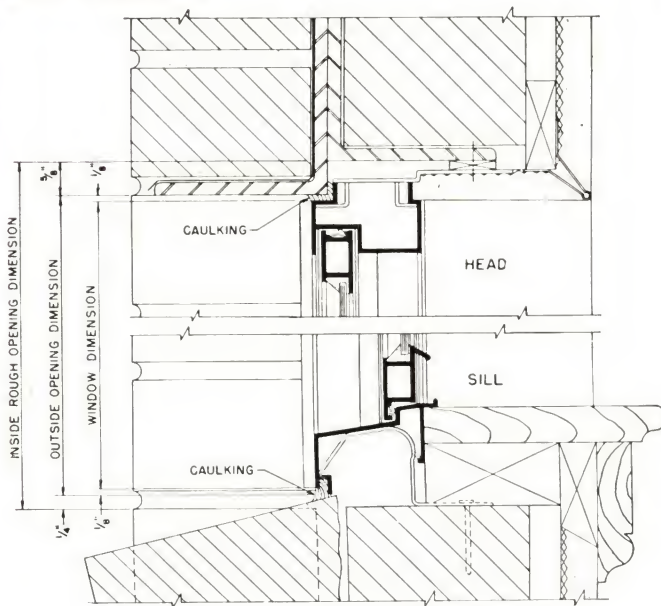


mullion details

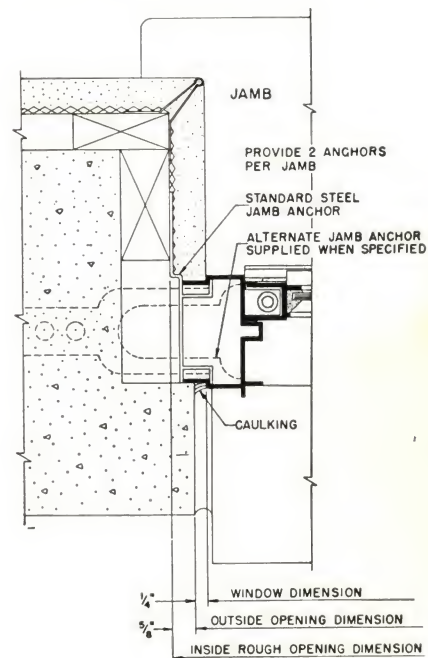
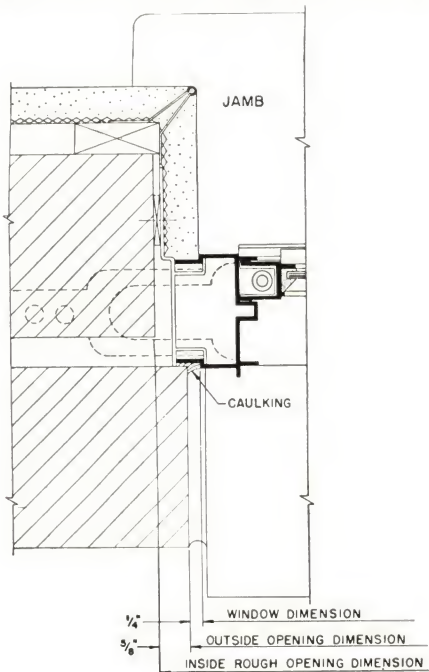
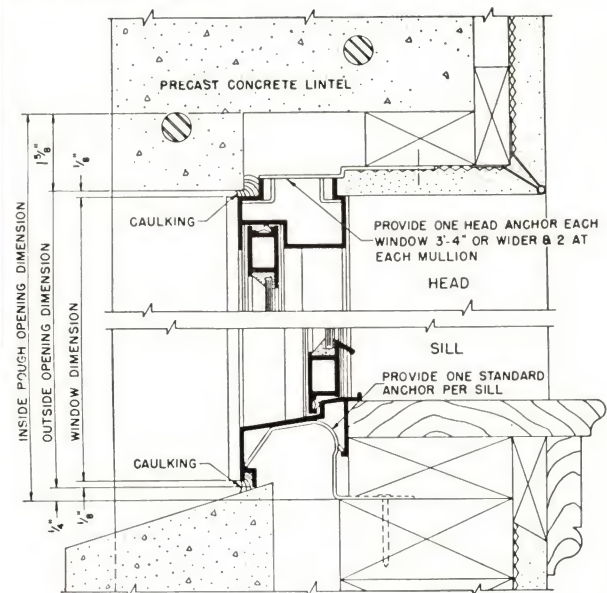
Note below: 180° special mullions are not required—Ceco-Sterling windows are designed for simple installations of multiple units.



SOLID MASONRY



CONCRETE BLOCK



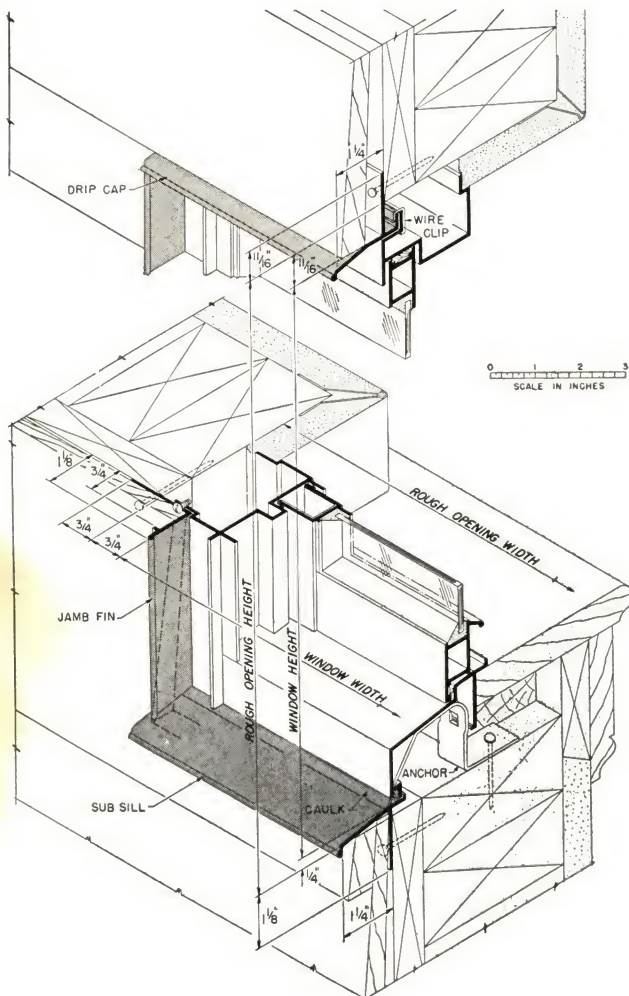
Aluminum Residential Windows • series 50-B

exterior fin & trim

Ceco-Sterling Exterior Fin & Trim is employed in frame construction. It deserves consideration because of the savings in erection time. It is easily and quickly installed on the window frame, eliminating fitting other trim. The jambs act as convenient guides for siding. Siding also butts to the drip cap at the head and to the sub-sill at the sill. The assembly work is done by the window erector.

installation instructions

- A—Attach left-hand fin to frame with $\#8 \times \frac{3}{8}$ round-head self-tapping screws and Tinnerman nuts.
- B—Attach right-hand fin to frame with $\#8 \times \frac{3}{8}$ round-head self-tapping screws.
- C—Attach drip caps with special wire clips.
- D—Apply sill anchors.
- E—Install window square and plumb and nail securely through jamb fin and anchors.
- F—Apply bead of caulking to caulking leg of sub-sill.
- G—Insert under window sill and nail through undrilled flashing leg into sheathing.

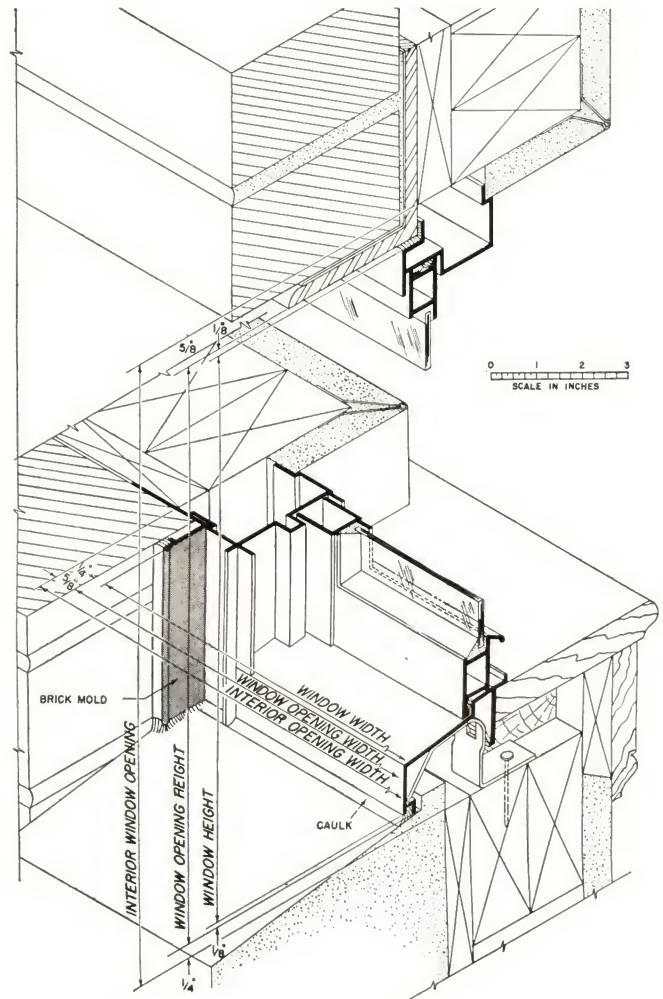


exterior brick mold

Ceco-Sterling Brick Mold is used in brick veneer or solid masonry construction. It too is a practical product and an added refinement, acting as an effective masonry guide and keeping the masonry units from crowding the window.

installation instructions

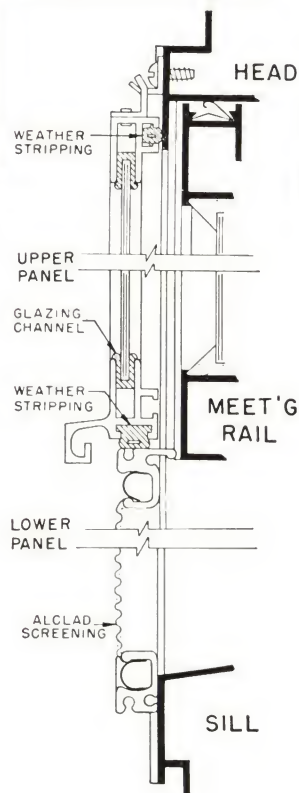
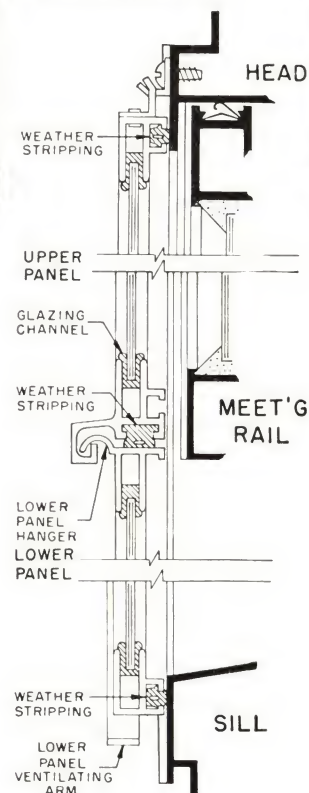
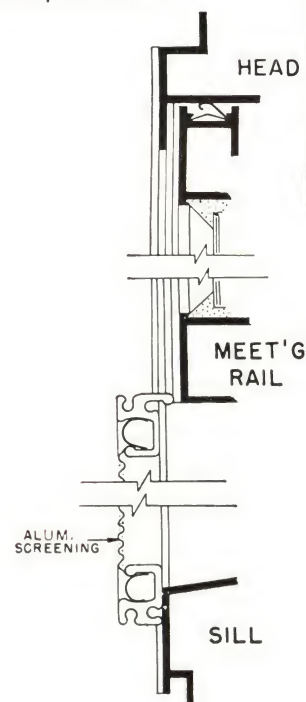
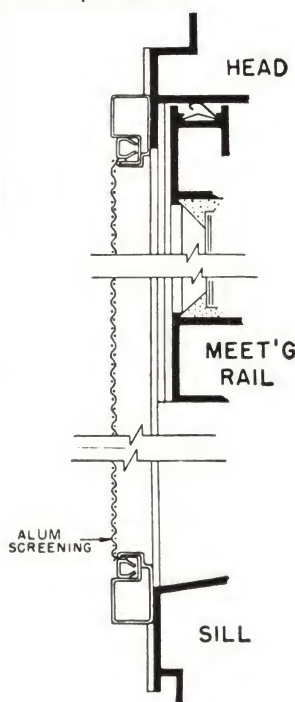
- A—Attach left-hand fin to frame with $\#8 \times \frac{3}{8}$ round-head self-tapping screws and Tinnerman nuts.
- B—Attach right-hand fin to frame with $\#8 \times \frac{3}{8}$ round-head self-tapping screws.
- C—Apply sill and head anchors as required.
- D—Install window square and plumb and nail securely through jamb fins and anchors.



screens and storm windows • half-size sections

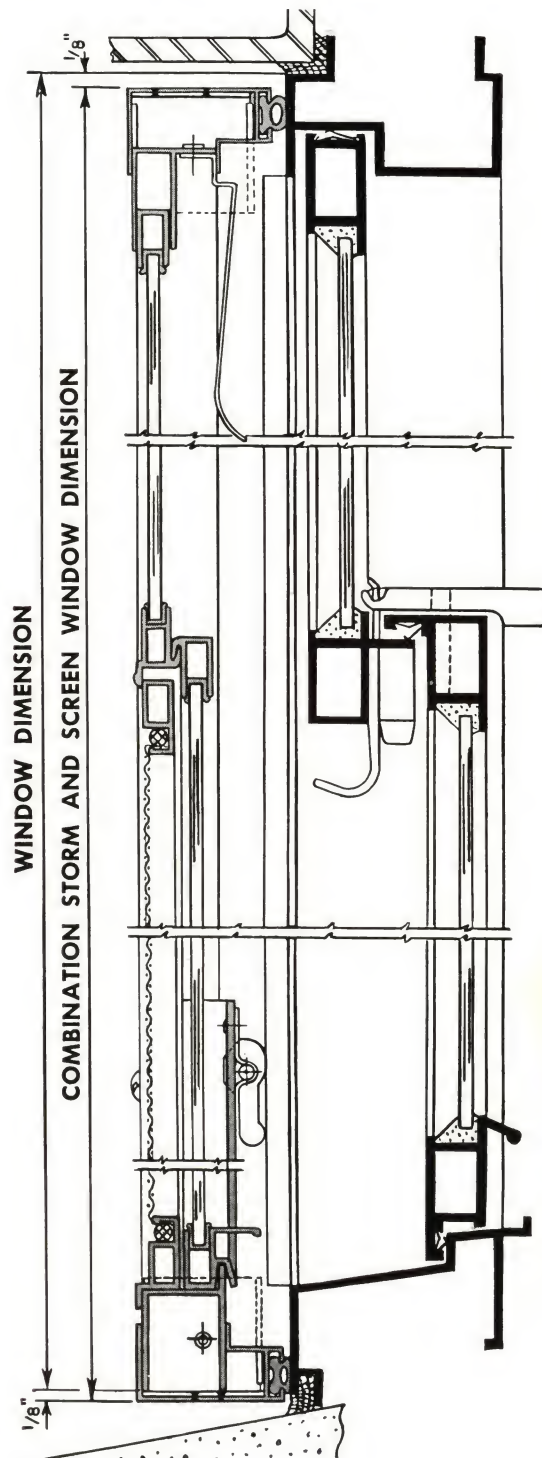
Screens are manufactured from extruded or rolled aluminum sections and contain aluminum screen cloth.

Storm windows are manufactured from extruded aluminum sections and are glazed with glass set in plastic seal.

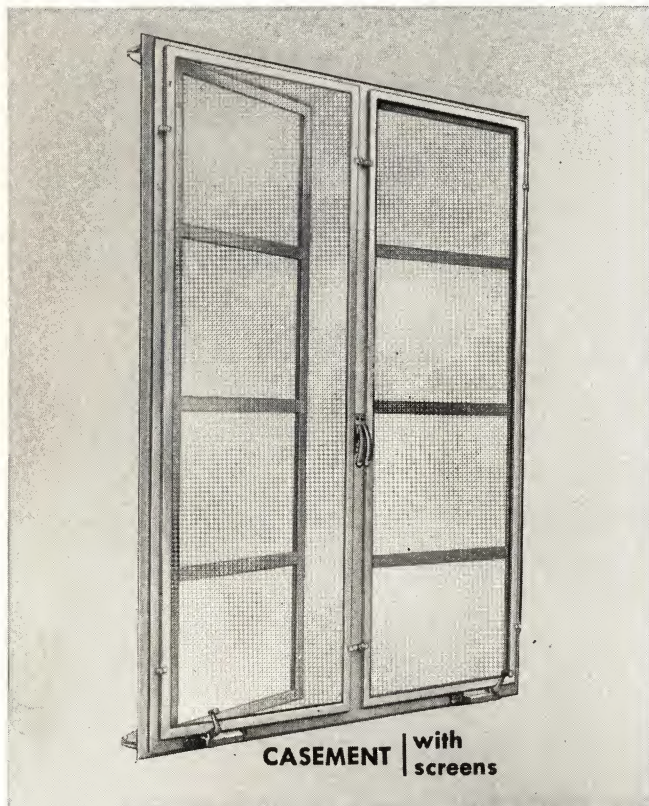
storm sash and screen panels**full two-panel storm sash****half-panel screen****full one-panel screen****3 in 1 window • prime • storm • screen**

The Ceco-Sterling 3-in-1 aluminum window is comprised of a series 50-B Prime window and a combination Storm and Screen unit. The Storm and Screen unit is attached directly to the Prime window after installation. The Prime window is shipped without glass. The Storm and Screen unit is glazed.

This product is available in types and sizes as shown on pages 16 and 17. Add prefix "X" before type number to indicate complete 3-in-1 window, as X20H16. Matching picture windows with fixed storm windows are available.



Aluminum Residence Casements



Aluminum Residence Casements have made rapid strides in popularity in all sections of the country. Besides the strong appeal of a modern glamor metal, their popularity centers around the ease of maintenance. The windows need not be painted, and they are easily cleaned by washing when the window glass is washed. Neutral in color, aluminum blends harmoniously with any surrounding color and any style of architecture.

Residence Casements are used by leading designers in all types of homes—large, small, traditional, modern. They are also used in apartments and small commercial buildings. Owner advantages of casements: Side-hinged ventilators control ventilation; full-vented types open to provide 100% ventilation; slender frames provide 10% to 30% more light; easy to open; easy to wash from inside the home; easy to screen and storm window from inside; hardware included, no extras to buy. Builder advantages: Easy to install; no fitting necessary; carried in stock.



screens

Ceco Screens for aluminum casements are made in aluminum frame. They are supplied with aluminum cloth, 18 x 14 mesh. Screens are easily attached to the inside of the windows with inconspicuous and conveniently located clips, and are easily removed and re-attached. A separate screen is furnished for each ventilator. Windows can easily be opened and closed with the window operator without touching the screen. There is no interference with shades or draperies. Frames are furnished with removable spline permitting easy rewiring.



storm windows

Ceco Storm Windows are manufactured of specially designed extruded aluminum sections, completely assembled and glazed with double strength glass at the factory. Rubber weathering seal is also furnished. Storm window units are provided for fixed side lights, transoms and operated ventilators to give complete coverage of glass and aluminum. Complete coverage is important because it conserves heat and retards condensation by insulating the metal window frame as well as the glass. Also, complete coverage enlarges the livable portion of the room in winter by allowing the air near the window to be warmed economically. Ventilators are available as illustrated in the photograph. If desired, they must be ordered with the storm windows.

specifications

GENERAL—All windows shall be of standard Aluminum Residential Casements as manufactured by Ceco Steel Products Corporation of sizes and types shown on the Architect's drawings. They shall conform to the Aluminum Window Manufacturers Association Specification C-A1.

MATERIAL—All principal members shall be especially extruded aluminum alloy 6063T-5 having a tensile strength of not less than 27000 P.S.I. The solid extruded 1" Z shaped sections are to be not less than 1/8" in thickness and have 5/32" web thickness.

CONSTRUCTION—The corners of the window frame and the ventilators are to be electrically flash welded with exposed surfaces at the weld, dressed to a smooth finish. Muntin bars shall be firmly attached at the cross joints and riveted to the abutting sash section. Side hinged ventilators to open out shall be on extension cleaning type hinges. Hinges are to be of aluminum securely welded to the frame and riveted to the ventilators. The hinge pins and the washers to be stainless steel. A continuous drip rail shall be provided at the transom bars and when specified at the head of the opening where ventilators extend the full height of the window. All windows shall be prepared for screens.

FINISH—All windows shall have a thoroughly clean natural aluminum finish with a protective coating of an approved type water-clear lacquer.

HARDWARE—All unattached hardware shall be packaged and shipped separately to prevent damage and shall be applied after erection. Operators shall be of the roto type die cast with aluminum finish. Handles to be die cast aluminum lacquer finish. Keepers and roto guides shall be of stainless steel. Necessary screws and rivets for attachment shall be of aluminum or non-magnetic stainless steel.

SCREENS AND STORM WINDOWS—All screens and storm windows shall be of aluminum as designed and manufactured by Ceco and of the flat fixed type. All screens and storm windows shall be easily removed from the inside.

related items

ERECTION—All windows shall be set plumb, true and level without springing or forcing in accordance with the Manufacturer's recommendation. Non-corrosive screws shall be used for the attachment to wood surrounds. Formed head and jamb fins, finished with an insulated coating, will be furnished when specified, complete with non-corrosive attaching bolts and nuts.

ADJUSTMENT—After windows are erected in place and before glazing, all ventilators shall be adjusted by erection contractor to operate smoothly and be weathertight when closed.

GLAZING—Windows shall be designed for glazing from outside, with spring wire glazing clips and aluminum glazing compound. (Glass, compound, glazing clips and glazing by others.)

full-size section

Sections for aluminum casements have a 5/32" web. They have a full 1/8" thickness in the flanges, and they are a full 1" in depth.



hardware

• operators

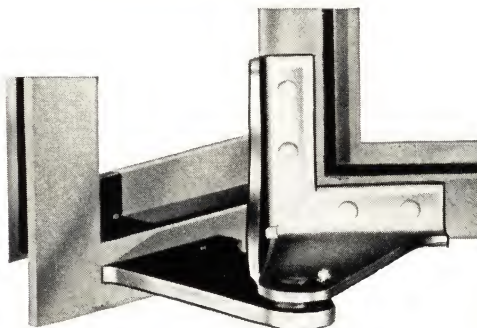
Roto Operators for aluminum residence casements are die cast with an aluminum finish. Operator arm is aluminum

2-8-20146—Left Hand 2-8-20246—Right Hand



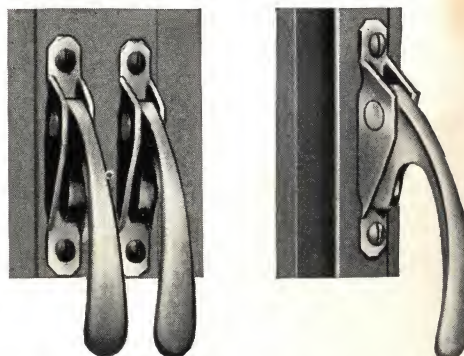
• hinges

Hinges are the extension cleaning type, made of aluminum securely welded to the frame and riveted to the ventilator.



• locking handles

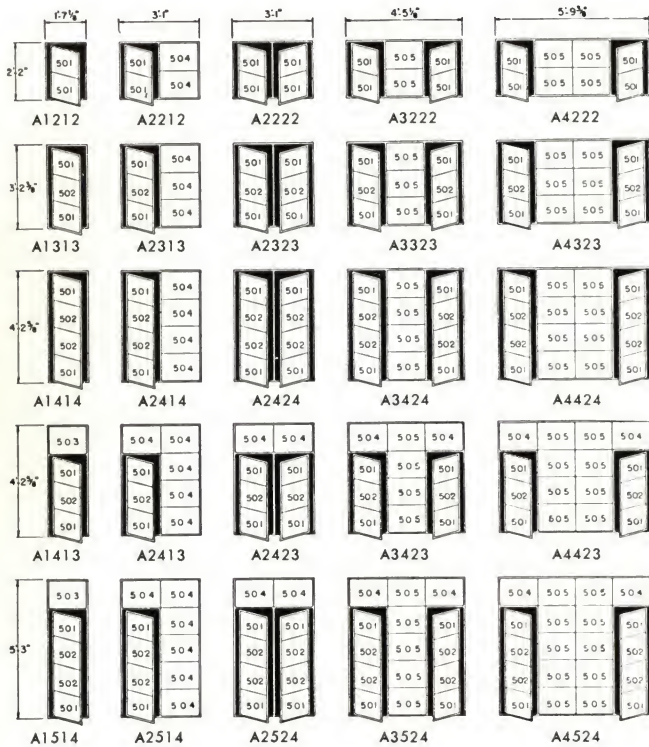
Locking Handles are die cast and have an aluminum finish. One Locking Handle is used for each ventilator. When two ventilators occur side by side, two Locking Handles are used.



Two 2-8-10646 Locking Handles
(for adjacent ventilators)

2-8-10646
(for single ventilator)

Aluminum Residence Casements • types and sizes



All ventilators swing out and are furnished with Roto type underscreen hardware, permitting the opening of the screened window without touching the screen. • Sizes shown are window dimensions. For opening dimensions of single units add $\frac{1}{4}$ ". For multiple window opening dimensions add actual unit dimensions plus $\frac{1}{4}$ ". • For casements with one ventilator, indicate by suffix L or R whether ventilator is left or right hand. (Example 1212-L.) All casements are viewed from outside. Handing is determined by location of hinges. A left-hand casement will have hinges on left when viewed from outside. • Glass sizes are for guidance only and should be verified on the job. NOTE: All types shown are also available as fixed types

Units shown, fixed or ventilated, are standard warehouse types. Muntin variations, as shown on facing page, may be obtained when specified, but as factory shipment only.

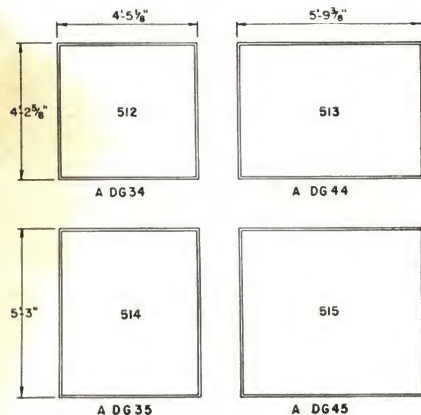
glass schedule

GLASS SCHEDULE			
MARK	W	H	Glass sizes are for guidance and should be verified on the job.
501	15 $\frac{3}{4}$	11 $\frac{1}{4}$	
502	15 $\frac{3}{4}$	12	
503	17 $\frac{1}{8}$	12	
504	17 $\frac{1}{2}$	12	
505	16	12	

picture windows • type and sizes

Ceco Picture Windows are available in six sizes for glass up to $\frac{1}{4}$ " in thickness, and in four sizes for double insulating glass, as shown here. • Sizes shown are window dimensions. For opening dimensions of single units add $\frac{1}{4}$ ". For multiple window opening dimensions add actual unit dimensions plus $\frac{1}{4}$ ". (It is not necessary to add anything for mullions.)

for insulating glazing

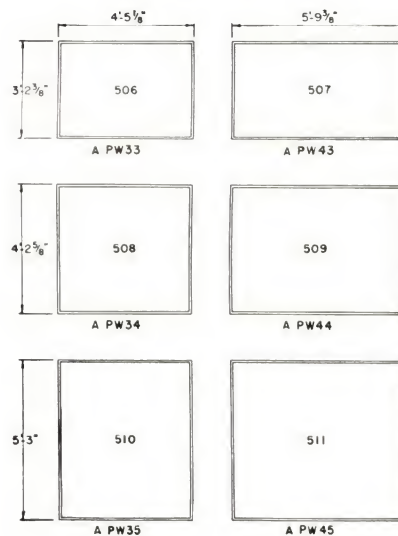


Designed for stock sizes of 1" insulating glass. Supplied with continuous inside glazing strips.

glass schedule

Mark	W	H	Mark	W	H
512	50 $\frac{3}{8}$	47 $\frac{3}{4}$	514	50 $\frac{3}{8}$	60 $\frac{1}{8}$
513	66 $\frac{5}{8}$	47 $\frac{3}{4}$	515	66 $\frac{5}{8}$	60 $\frac{1}{8}$

for standard glazing

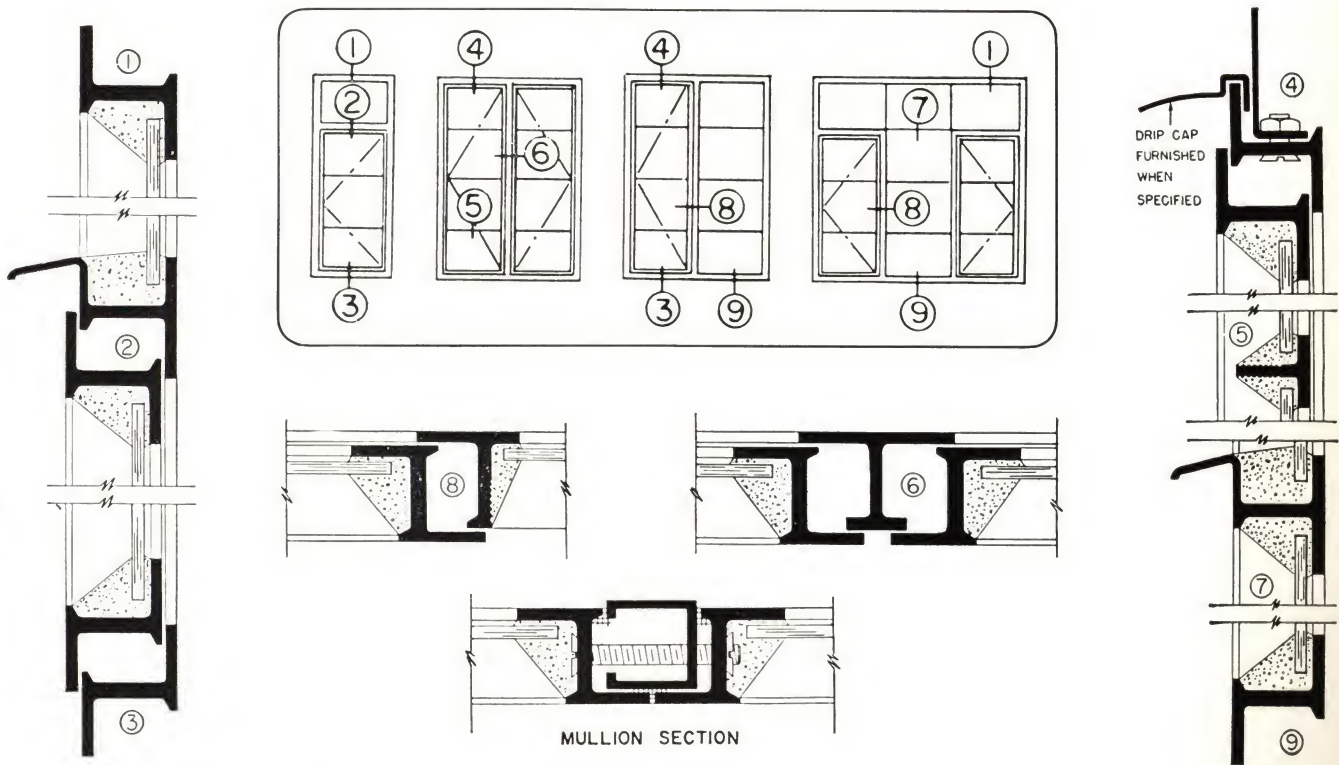


The six stock sizes illustrated at the left, for standard glazing, are designed to receive up to $\frac{1}{4}$ " plate glass.

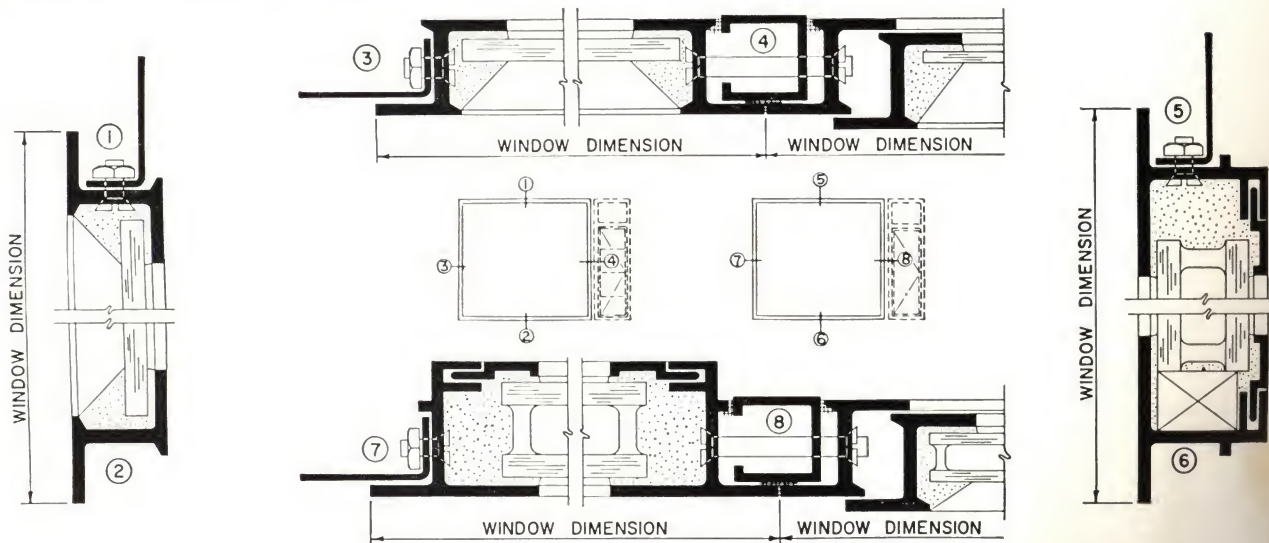
glass schedule

Mark	W	H	Mark	W	H
506	51 $\frac{3}{8}$	36 $\frac{1}{8}$	509	67 $\frac{5}{8}$	48 $\frac{7}{8}$
507	67 $\frac{5}{8}$	36 $\frac{1}{8}$	510	51 $\frac{3}{8}$	61 $\frac{1}{4}$
508	51 $\frac{3}{8}$	48 $\frac{7}{8}$	511	67 $\frac{5}{8}$	61 $\frac{1}{4}$

● casement windows • half-size sections



● picture windows • half-size sections



Muntin Variations—Additional architectural treatments may be obtained by omitting muntins from the casements shown on the opposite page. Below are illustrated several variations possible with only two sizes of residence casements.

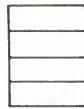
SMALL WINDOW VARIATIONS



With All Muntins

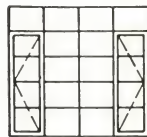


With All Muntins

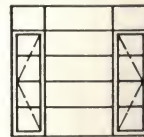


Vertical Muntins Omitted

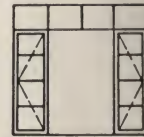
LARGE WINDOW VARIATIONS



With All Muntins



Center Vertical Muntin Omitted



Horizontal Muntins In Vents Only

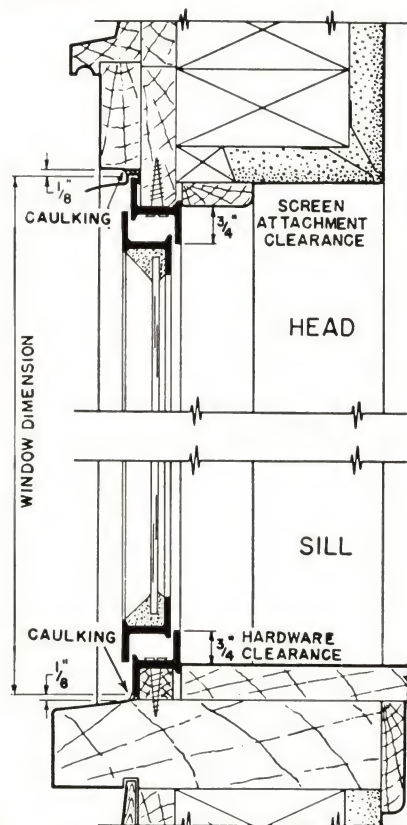
Aluminum Residence Casements

installation details • scale 3" = 1'-0"

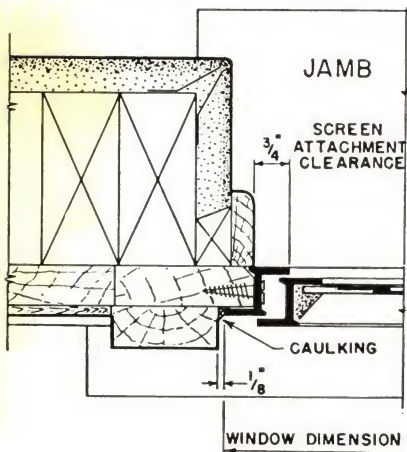
Note that the finished exterior openings are $\frac{1}{4}$ " higher and $\frac{1}{4}$ " wider than the window dimensions, to allow clearance for installing. In detailing the interior finish, observe the $\frac{3}{4}$ " clearances, needed for application of hardware, screens and storms. • The architect has considerable freedom in detailing casement installa-

tions beyond the few suggested drawings shown here. Stone tiles may be used instead of brick. Structural glass or stone stools may replace wood. • Hardware is shipped in packages. The window erector installs the hardware after the erection of the window and adjustment of the ventilators. • Mastic is provided by the

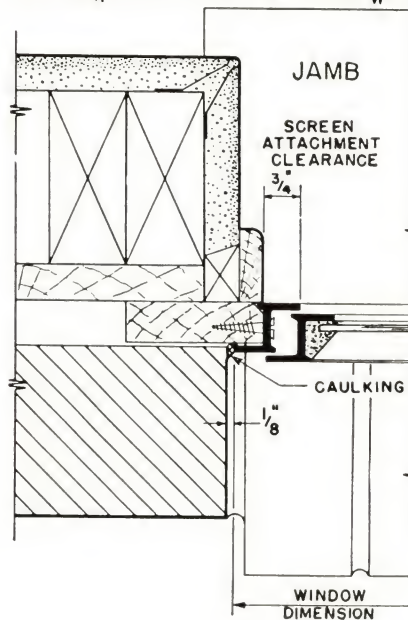
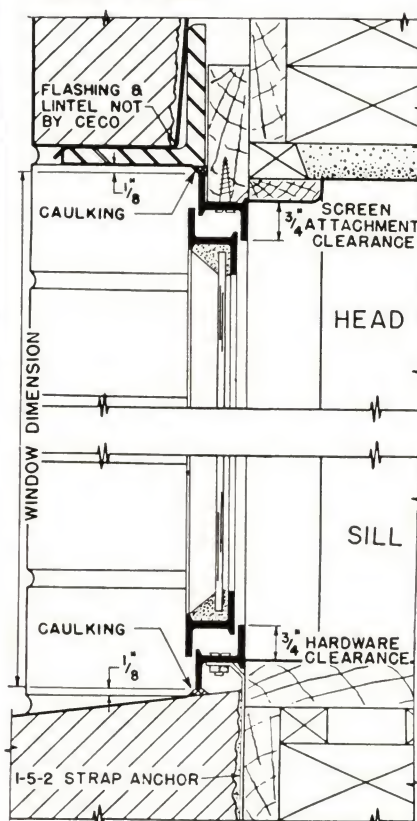
FRAME



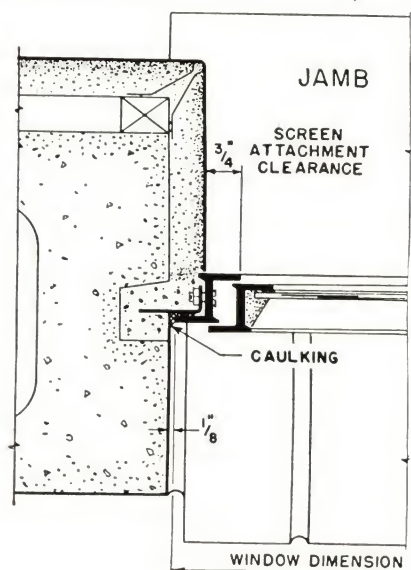
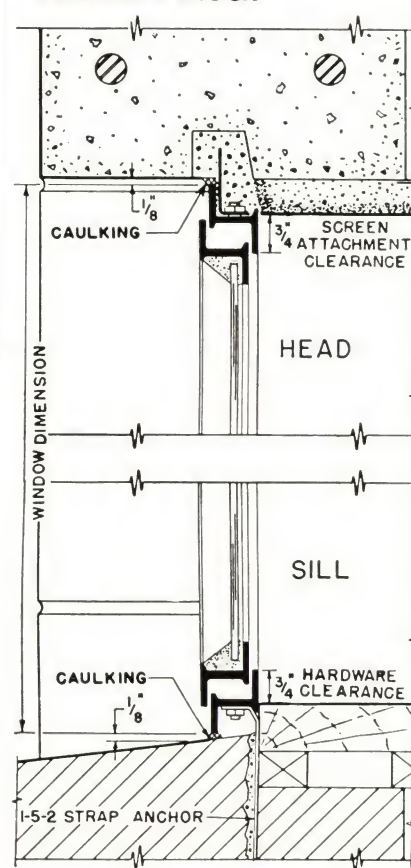
CAULKING TO BE FURNISHED BY OTHERS



BRICK VENEER

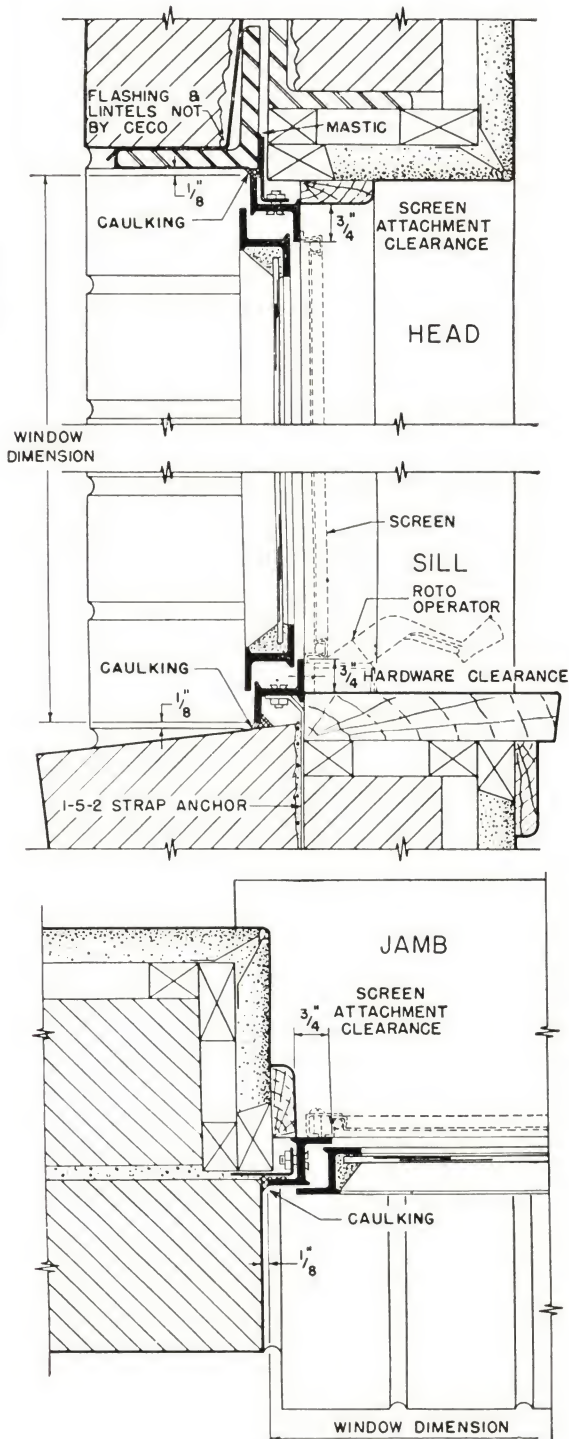


CONCRETE BLOCK



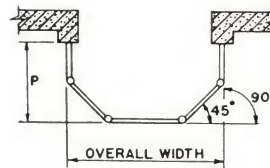
window erector but caulking is by other trades. • Fins are shipped loose. Strap anchors are shipped flat so they may be formed by the erector around any sill profile. The bolts and nuts necessary for the attachment of fins and strap anchors are furnished with the windows.

SOLID BRICK

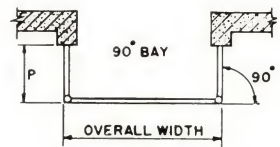


bay and corner mullions

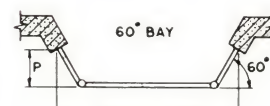
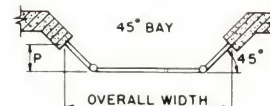
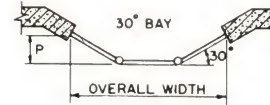
Standard Aluminum Pipe Mullions furnished by Ceco are not to be used as support members. Load-bearing mullions, furnished by others, are to be of proper size to carry the load. Top and bottom plates should be used with load-bearing mullions. • Pipe mullions are to be drilled in the field by the window erector to match anchor holes in the windows. • Mastic where indicated is to be furnished by the window erector, but caulking is by other trades.



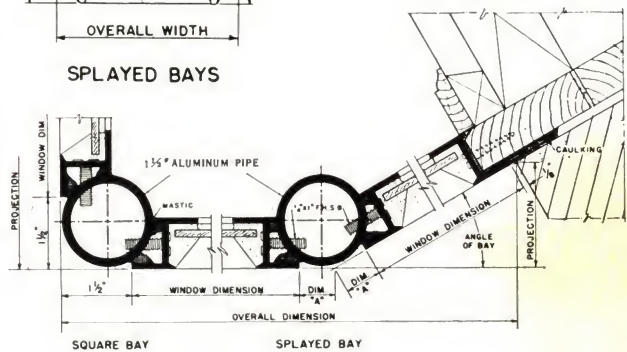
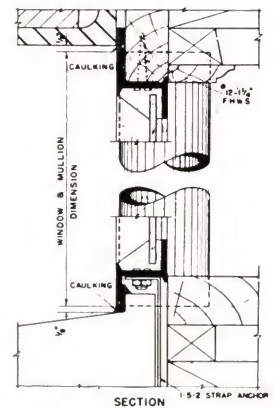
SQUARE SPLAYED BAY



SQUARE BAY



SPLAYED BAYS

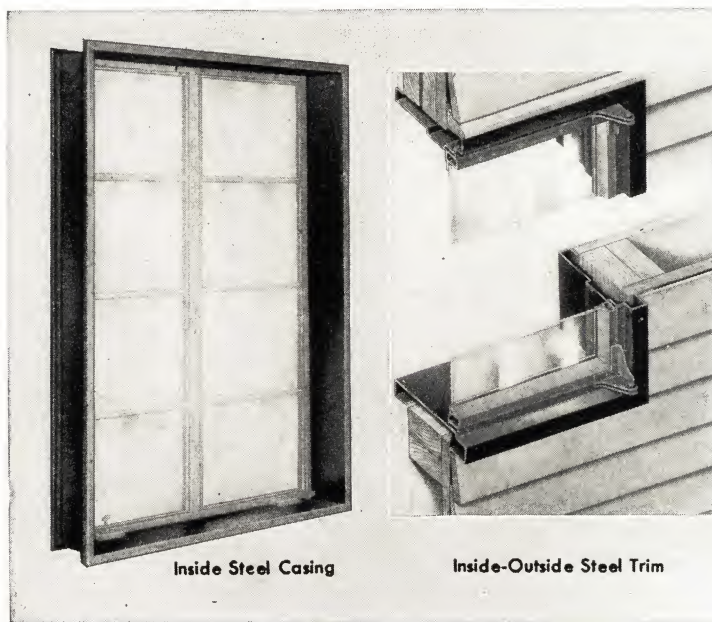


SQUARE BAY

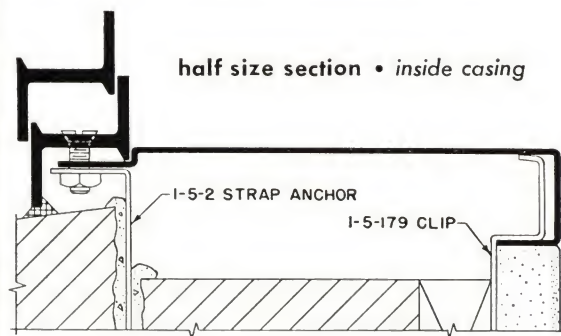
SPLAYED BAY

ANGLE OF BAY	LIGHTS IN RETURN	OVERALL WIDTH			PROJEC- TION	DIM. "A"
		LIGHTS IN FRONT SECTION				
		2	3	4		
30°	1	6'-1 1/8"	7'-5 1/4"	8'-9 1/2"	10"	3/4"
	2	8'-8 1/8"	10'-0 1/4"	11'-4 1/2"	1'-6 3/8"	
45°	1	5'-7 1/4"	6'-11 3/8"	8'-3 3/8"	1'-2 1/4"	7/8"
	2	7'-8 1/2"	9'-0 3/8"	10'-4 1/8"	2'-2 7/8"	
60°	1	4'-11 1/4"	6'-3 3/8"	7'-7 3/8"	1'-5 1/2"	1"
	2	6'-5 1/8"	7'-9 1/4"	9'-1 1/2"	2'-9"	
90°	1	3'-4"	4'-8 1/8"	6'-0 3/8"	1'-8 3/4"	1 1/2"
	2	3'-4"	4'-8 1/8"	6'-0 3/8"	3'-2 3/8"	
SQUARE SPLAYED	1	5'-8 1/4"	7'-0 3/8"	8'-4 3/8"	2'-10 7/8"	7/8"
	2	7'-9 1/2"	9'-1 3/8"	10'-5 7/8"	5'-5 3/4"	

Casings and Trim



Ceco Inside Steel Casings and Inside-Outside Trim provide economical and neat finishes for aluminum casements. They are both available in 4½" and 5¼" depths for use with all standard residence casements and in popular multiple openings. They are adaptable to all kinds of wall construction, in small homes and large housing projects.



inside-outside trim

types available

LIGHTS HIGH	LIGHTS WIDE					
	Single Unit Openings				Two Mullion Openings	
	1-Lt.	2-Lts.	3-Lts.	4-Lts.	5-Lts.	6-Lts.
2	12	22	32	42	131-2	141-2
3	13	23	33	43	131-3	141-3
4	14	24	34	44	131-4	141-4
5	15	25	35	45	131-5	141-5

All units shown are warehouse stock types for 5¼" depth only. Nomenclature for Inside-Outside Trim shown above corresponds to the casement units with which they are to be used. Examples: 23 Inside-Outside Trim is used with a 2313 or 2323 casement. 131-3 Inside-Outside Trim is used with 1313-L casement, 33 fixed window and 1313-R casement.

specifications

GENERAL—All inside-outside trim units for aluminum residence casements shall be manufactured, complete with all necessary anchors, by Ceco Steel Products Corporation.

MATERIAL—Head and Jamb members of inside-outside trim shall be fabricated from 18 gauge steel. Sill members shall be made from 16 gauge steel.

CONSTRUCTION—Inside-outside trim shall be formed to depths of 4½" and 5¼" measured from inside face of window to inside plaster line at the head and jambs. The stool extends ⅜" inside. Inside flange of inside-outside trim to be 1" wide. Clip anchors shall be furnished to secure the trim to the wall construction. Inside-outside trim shall provide for mortise and tenon assembly of all four corners.

BONDERIZING AND PAINTING—All inside-outside trim units shall be treated with Bonderite and receive one coat of gray primer paint baked on at 300° F. for not less than one-half hour.

FIELD PAINTING—Immediately upon delivery, and before attachment to windows, inside-outside trim shall be painted by painting contractor with one coat of color selected by the owner and a second coat applied after installation.

ASSEMBLY—Inside-outside trim members shall be accurately fitted and tenons clinched over by erection contractor. The inside-outside trim unit is then to be secured directly to casement by means of sheet metal screws.

NOTE—Shade bracket holes are not provided on standard trim, but can be punched if specified at a slight extra charge.

casings

types available

LIGHTS HIGH	LIGHTS WIDE									
	Single Unit Openings				One Mullion Openings		Two Mullions Openings			
	1-Lt.	2-Lts.	3-Lts.	4-Lts.	4-Lts.	6-Lts.	4-Lts.	5-Lts.	6-Lts.	6-Lts.
2	12	22	32	42	22-2	33-2	121-2	131-2	141-2	222-2
3	13	23	33	43	22-3	33-3	121-3	131-3	141-3	222-3
4	14	24	34	44	22-4	33-4	121-4	131-4	141-4	222-4
5	15	25	35	45	22-5	33-5	121-5	131-5	141-5	222-5

Units in bold face figures are warehouse stock types for 5¼" depth only. Casing nomenclature shown above corresponds to the casement units with which they are to be used. Examples: 23 casing is used with a 2313 or 2323 casement. 131-3 casing is used with 1313-L casement, 33 fixed window & 1313-R casement.

specifications

GENERAL—All inside steel casings for aluminum residence casements shall be manufactured, complete with all necessary anchors, by Ceco Steel Products Corporation.

MATERIAL—Head, Jamb and Sill members of casings shall be fabricated from 18 gauge steel.

CONSTRUCTION—Casings shall be J shaped with depths of 4½" and 5¼" measured from inside face of casement to inside face of casing. Inside face of casing to be 1" wide and finish flush with plaster. Clip anchors shall be furnished to secure the casing to the wall construction. Casings shall provide for mortise and tenon assembly of all four corners.

BONDERIZING AND PAINTING—All casings shall be treated with Bonderite and receive one coat of gray primer paint baked on at 300° F. for not less than one-half hour.

FIELD PAINTING—Immediately upon delivery, and before attachment to windows, casings shall be painted by painting contractor with one coat of color selected by the owner and a second coat applied after installation.

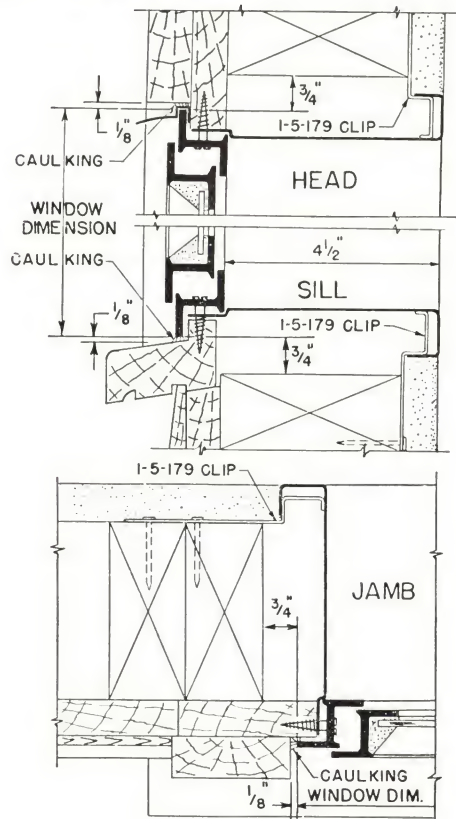
ASSEMBLY—Casing members shall be accurately fitted and tenons clinched over by erection contractor. The casing unit is then to be secured directly to casement by bolts and nuts.

NOTE—Steel fins are recommended for masonry construction.

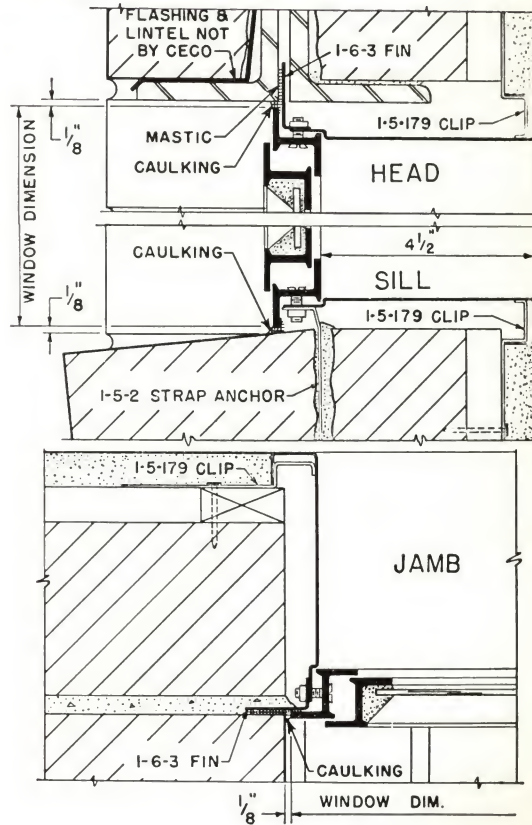
NOTE—Shade bracket holes are not provided on standard casings, but can be punched if specified at a slight extra charge.

installation details • scale 3" = 1'-0"

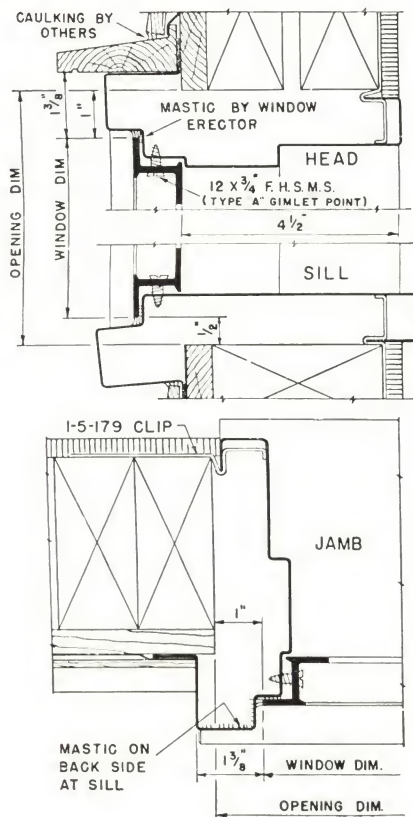
CASING—frame construction



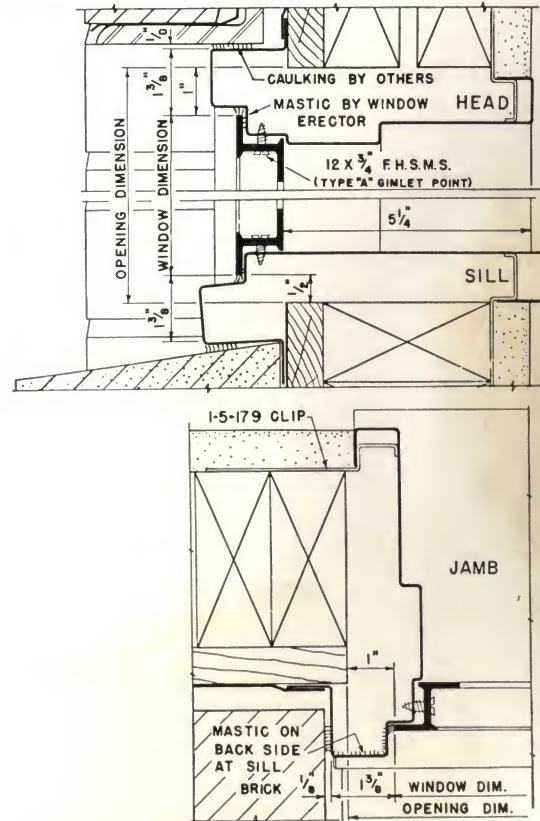
CASING—solid brick construction



TRIM—frame construction



TRIM—brick veneer construction



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